Fabrice Matichard

List of Publications by Year
in descending order

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36 papers	4,187 citations	304368 22 h-index	395343 33 g-index

37 all docs	37 docs citations	37 times ranked	4764 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	Quantum-Enhanced Advanced LIGO Detectors in the Era of Gravitational-Wave Astronomy. Physical Review Letters, 2019, 123, 231107.	2.9	359
5	Sensitivity of the Advanced LIGO detectors at the beginning of gravitational wave astronomy. Physical Review D, 2016, 93, .	1.6	286
6	Sensitivity and performance of the Advanced LIGO detectors in the third observing run. Physical Review D, 2020, 102, .	1.6	196
7	Beating the Spin-Down Limit on Gravitational Wave Emission from the Crab Pulsar. Astrophysical Journal, 2008, 683, L45-L49.	1.6	160
8	Seismic isolation of Advanced LIGO: Review of strategy, instrumentation and performance. Classical and Quantum Gravity, 2015, 32, 185003.	1.5	141
9	Observation of a kilogram-scale oscillator near its quantum ground state. New Journal of Physics, 2009, 11, 073032.	1.2	123
10	Frequency-Dependent Squeezing for Advanced LIGO. Physical Review Letters, 2020, 124, 171102.	2.9	99
11	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
12	All-Sky LIGO Search for Periodic Gravitational Waves in the Early Fifth-Science-Run Data. Physical Review Letters, 2009, 102, 111102.	2.9	83
13	Einstein@Home search for periodic gravitational waves in LIGO S4 data. Physical Review D, 2009, 79, .	1.6	83
14	Search for Gravitational-Wave Bursts from Soft Gamma Repeaters. Physical Review Letters, 2008, 101, 211102.	2.9	69
15	Advanced LIGO two-stage twelve-axis vibration isolation and positioning platform. Part 1: Design and production overview. Precision Engineering, 2015, 40, 273-286.	1.8	66
16	Ultra-low phase noise squeezed vacuum source for gravitational wave detectors. Optica, 2016, 3, 682.	4.8	52
17	Advanced LIGO two-stage twelve-axis vibration isolation and positioning platform. Part 2: Experimental investigation and tests results. Precision Engineering, 2015, 40, 287-297.	1.8	44
18	Environmental noise in advanced LIGO detectors. Classical and Quantum Gravity, 2021, 38, 145001.	1.5	38

#	Article	IF	Citations
19	Review: Tiltâ€Free Lowâ€Noise Seismometry. Bulletin of the Seismological Society of America, 2015, 105, 497-510.	1.1	28
20	Astrophysically triggered searches for gravitational waves: status and prospects. Classical and Quantum Gravity, 2008, 25, 114051.	1.5	26
21	Subtracting Tilt from a Horizontal Seismometer Using a Groundâ€Rotation Sensor. Bulletin of the Seismological Society of America, 2017, 107, 709-717.	1.1	24
22	First joint search for gravitational-wave bursts in LIGO and GEO 600 data. Classical and Quantum Gravity, 2008, 25, 245008.	1.5	22
23	Sensor fusion methods for high performance active vibration isolation systems. Journal of Sound and Vibration, 2015, 342, 1-21.	2.1	20
24	LIGOâ€™s quantum response to squeezed states. Physical Review D, 2021, 104, .	1.6	19
25	A Nonlinear Method for Improving the Active Control Efficiency of Smart Structures Subjected to Rigid Body Motions. IEEE/ASME Transactions on Mechatronics, 2007, 12, 542-548.	3.7	18
26	Quantum correlation measurements in interferometric gravitational-wave detectors. Physical Review A, 2017, 95, .	1.0	16
27	Modeling and experiment of the suspended seismometer concept for attenuating the contribution of tilt motion in horizontal measurements. Review of Scientific Instruments, 2016, 87, 065002.	0.6	9
28	Low phase noise squeezed vacuum for future generation gravitational wave detectors. Classical and Quantum Gravity, 2020, 37, 185014.	1.5	5
29	Improvement of potential energy exchange using nonlinear control. , 0, , .		4
30	Nonlinear approach for the control of mechanical coupling effects and smart structures of limited power. , 0, , .		3
31	Hybrid modal nodal method for multibody smart structure model reduction: application to modal feedback control. Smart Materials and Structures, 2006, 15, 1887-1898.	1.8	3
32	Dynamics Enhancements of Advanced LIGO Multi-Stage Active Vibration Isolators and Related Control Performance Improvement. , 2012, , .		2
33	On the Use of Mechanical Filters to Attenuate the Transmission of Tilt Motion to Inertial Sensors. Bulletin of the Seismological Society of America, 2016, 106, 987-1001.	1.1	2
34	Prospects for observing and localizing gravitational-wave transients with Advanced LIGO, Advanced Virgo and KAGRA. , 2018, 21, 1.		2
35	Advanced LIGO squeezer platform for backscattered light and optical loss reduction. Classical and Quantum Gravity, 2020, 37, 215015.	1.5	2
36	Hybrid modeling for the active control of multibody smart structures â€“ modeling validation. International Journal of Applied Electromagnetics and Mechanics, 2006, 23, 165-175.	0.3	1