Arnaud Landragin

List of Publications by Year
in descending order

111 papers	6,047 citations	66343 42 h-index	69250 77 g-index
117 all docs	117 docs citations	117 times ranked	2502 citing authors

#	Article	IF	Citations
1	Rotation sensing with a dual atom-interferometer Sagnac gyroscope. Classical and Quantum Gravity, 2000, 17, 2385-2398.	4.0	367
2	Six-Axis Inertial Sensor Using Cold-Atom Interferometry. Physical Review Letters, 2006, 97, 010402.	7.8	279
3	Detecting inertial effects with airborne matter-wave interferometry. Nature Communications, 2011, 2, 474.	12.8	269
4	Limits to the sensitivity of a low noise compact atomic gravimeter. Applied Physics B: Lasers and Optics, 2008, 92, 133-144.	2.2	232
5	Measurement of the van der Waals Force in an Atomic Mirror. Physical Review Letters, 1996, 77, 1464-1467.	7.8	223
6	Gravity measurements below 10â^'9 g with a transportable absolute quantum gravimeter. Scientific Reports, 2018, 8, 12300.	3.3	206
7	Prospects for fundamental physics with LISA. General Relativity and Gravitation, 2020, 52, 1.	2.0	198
8	Continuous Cold-Atom Inertial Sensor with<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mn>1</mml:mn><mml:mtext>â€‰</mml:mtext><mml:mtext>â€‰</mml:mtext><mml:mi>nrad</ Stability. Physical Review Letters, 2016, 116, 183003.	7.8	189
9	The influence of transverse motion within an atomic gravimeter. New Journal of Physics, 2011, 13, 065025.	2.9	178
10	Measurement of the Sensitivity Function in a Time-Domain Atomic Interferometer. IEEE Transactions on Instrumentation and Measurement, 2008, 57, 1141-1148.	4.7	169
11	STE-QUESTâ€"test of the universality of free fall using cold atom interferometry. Classical and Quantum Gravity, 2014, 31, 115010.	4.0	159
12	Exploring gravity with the MIGA large scale atom interferometer. Scientific Reports, 2018, 8, 14064.	3.3	153
13	Quantum tests of the Einstein Equivalence Principle with the STEâ€"QUEST space mission. Advances in Space Research, 2015, 55, 501-524.	2.6	151
14	Characterization and limits of a cold-atom Sagnac interferometer. Physical Review A, 2009, 80, .	2.5	144
15	Stability comparison of two absolute gravimeters: optical versus atomic interferometers. Metrologia, 2014, 51, L15-L17.	1.2	143
16	Dual matter-wave inertial sensors in weightlessness. Nature Communications, 2016, 7, 13786.	12.8	142
17	Comparison between two mobile absolute gravimeters: optical versus atomic interferometers. Metrologia, 2010, 47, L9-L11.	1.2	129
18	Interleaved atom interferometry for high-sensitivity inertial measurements. Science Advances, 2018, 4, eaau7948.	10.3	122

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19	A cold atom pyramidal gravimeter with a single laser beam. Applied Physics Letters, 2010, 96, .	3.3	106
20	Quantum physics exploring gravity in the outer solar system: the SAGAS project. Experimental Astronomy, 2009, 23, 651-687.	3.7	101
21	The Sagnac effect: 20 years of development in matter-wave interferometry. Comptes Rendus Physique, 2014, 15, 875-883.	0.9	100
22	The BNM Watt Balance Project. IEEE Transactions on Instrumentation and Measurement, 2005, 54, 850-853.	4.7	99
23	Operating an atom interferometer beyond its linear range. Metrologia, 2009, 46, 87-94.	1.2	98
24	Enhancing the Area of a Raman Atom Interferometer Using a Versatile Double-Diffraction Technique. Physical Review Letters, 2009, 103, 080405.	7.8	97
25	Hybridizing matter-wave and classical accelerometers. Applied Physics Letters, 2014, 105, .	3.3	95
26	High-accuracy inertial measurements with cold-atom sensors. AVS Quantum Science, 2020, 2, .	4.9	94
27	Low frequency gravitational wave detection with ground-based atom interferometer arrays. Physical Review D, 2016, 93, .	4.7	75
28	Micro-gravity investigations for the LNE watt balance project. Metrologia, 2008, 45, 265-274.	1.2	74
29	Precision Gravity Tests with Atom Interferometry in Space. Nuclear Physics, Section B, Proceedings Supplements, 2013, 243-244, 203-217.	0.4	68
30	Compact laser system for atom interferometry. Applied Physics B: Lasers and Optics, 2006, 84, 643-646.	2.2	66
31	Underground operation at best sensitivity of the mobile LNE-SYRTE cold atom gravimeter. Gyroscopy and Navigation, 2014, 5, 266-274.	1.3	65
32	Off-resonant Raman transition impact in an atom interferometer. Physical Review A, 2008, 78, .	2.5	64
33	ELGARâ€"a European Laboratory for Gravitation and Atom-interferometric Research. Classical and Quantum Gravity, 2020, 37, 225017.	4.0	63
34	Light-pulse atom interferometry in microgravity. European Physical Journal D, 2009, 53, 353-357.	1.3	60
35	Dual-wavelength laser source for onboard atom interferometry. Optics Letters, 2011, 36, 4128.	3.3	59
36	From optical lattice clocks to the measurement of forces in the Casimir regime. Physical Review A, 2007, 75, .	2.5	58

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37	All-Optical Bose-Einstein Condensates in Microgravity. Physical Review Letters, 2019, 123, 240402.	7.8	51
38	How to estimate the differential acceleration in a two-species atom interferometer to test the equivalence principle. New Journal of Physics, 2009, 11, 113010.	2.9	48
39	A Compact Atom Interferometer for Future Space Missions. Microgravity Science and Technology, 2010, 22, 551-561.	1.4	48
40	Design of a dual species atom interferometer for space. Experimental Astronomy, 2015, 39, 167-206.	3.7	48
41	Double diffraction in an atomic gravimeter. Physical Review A, 2010, 81, .	2.5	45
42	I.C.E.: a transportable atomic inertial sensor for test in microgravity. Applied Physics B: Lasers and Optics, 2006, 84, 673-681.	2.2	44
43	Correlative methods for dual-species quantum tests of the weak equivalence principle. New Journal of Physics, 2015, 17, 085010.	2.9	44
44	Efficient cooling and trapping of strontium atoms. Optics Letters, 2003, 28, 468.	3.3	39
45	Influence of lasers propagation delay on the sensitivity of atom interferometers. European Physical Journal D, 2007, 44, 419-425.	1.3	39
46	Phase Locking a Clock Oscillator to a Coherent Atomic Ensemble. Physical Review X, 2015, 5, .	8.9	39
47	Specular versus diffuse reflection of atoms from an evanescent-wave mirror. Optics Letters, 1996, 21, 1591.	3.3	38
48	Atom interferometers and optical atomic clocks: New quantum sensors for fundamental physics experiments in space. Nuclear Physics, Section B, Proceedings Supplements, 2007, 166, 159-165.	0.4	38
49	Reaching the quantum noise limit in a high-sensitivity cold-atom inertial sensor. Journal of Optics B: Quantum and Semiclassical Optics, 2003, 5, S136-S142.	1.4	34
50	Perturbations of the local gravity field due to mass distribution on precise measuring instruments: a numerical method applied to a cold atom gravimeter. Metrologia, 2011, 48, 299-305.	1.2	34
51	Metrology with Atom Interferometry: Inertial Sensors from Laboratory to Field Applications. Journal of Physics: Conference Series, 2016, 723, 012049.	0.4	33
52	Wide bandwidth phase-locked diode laser with an intra-cavity electro-optic modulator. Optics Communications, 2009, 282, 977-980.	2.1	29
53	Heterodyne non-demolition measurements on cold atomic samples: towards the preparation of non-classical states for atom interferometry. New Journal of Physics, 2011, 13, 065021.	2.9	27
54	Atom interferometry with top-hat laser beams. Applied Physics Letters, 2018, 113, .	3.3	27

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55	Compact differential gravimeter at the quantum projection-noise limit. Physical Review A, 2022, 105, .	2.5	26
56	Robust laser frequency stabilization by serrodyne modulation. Optics Letters, 2012, 37, 1005.	3.3	25
57	Stability enhancement by joint phase measurements in a single cold atomic fountain. Physical Review A, 2014, 90, .	2.5	25
58	Development of compact cold-atom sensors for inertial navigation. Proceedings of SPIE, 2016, , .	0.8	24
59	Feedback Control of Trapped Coherent Atomic Ensembles. Physical Review Letters, 2013, 110, 210503.	7.8	23
60	Influence of optical aberrations in an atomic gyroscope. European Physical Journal D, 2005, 36, 257-260.	1.3	21
61	A reflection grating for atoms at normal incidence. Europhysics Letters, 1997, 39, 485-490.	2.0	20
62	The Space Atom Interferometer project: status and prospects. Journal of Physics: Conference Series, 2011, 327, 012050.	0.4	20
63	A fibered laser system for the MIGA large scale atom interferometer. Scientific Reports, 2020, 10, 3268.	3.3	20
64	A marginally stable optical resonator for enhanced atom interferometry. Journal of Physics B: Atomic, Molecular and Optical Physics, 2017, 50, 155002.	1.5	18
65	Improving the phase response of an atom interferometer by means of temporal pulse shaping. New Journal of Physics, 2018, 20, 023020.	2.9	18
66	In situ characterization of an optical cavity using atomic light shift. Optics Letters, 2010, 35, 3769.	3.3	17
67	Spin-squeezing and Dicke-state preparation by heterodyne measurement. Physical Review A, 2011, 83, .	2.5	17
68	Characterizing Earth gravity field fluctuations with the MIGA antenna for future gravitational wave detectors. Physical Review D, 2019, 99, .	4.7	17
69	Effective velocity distribution in an atom gravimeter: Effect of the convolution with the response of the detection. Physical Review A, 2014, 90, .	2.5	15
70	Testing the universality of free fall using correlated 39Kâ€“87Rb atom interferometers. AVS Quantum Science, 2022, 4, .	4.9	14
71	Comparison of 3 Absolute Gravimeters Based on Different Methods for the e-MASS Project. IEEE Transactions on Instrumentation and Measurement, 2011, 60, 2527-2532.	4.7	12
72	The matter-wave laser interferometer gravitation antenna (MIGA): New perspectives for fundamental physics and geosciences. E3S Web of Conferences, 2014, 4, 01004.	0.5	12

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73	Accurate trajectory alignment in cold-atom interferometers with separated laser beams. Physical Review A, 2020, 101, .	2.5	12
74	A compact micro-wave synthesizer for transportable cold-atom interferometers. Review of Scientific Instruments, 2014, 85, 063114.	1.3	10
75	Generation of high-purity low-temperature samples of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mmultiscripts><mml:mi mathvariant="normal">K</mml:mi><mml:mprescripts /><mml:none /><mml:mn>39</mml:mn></mml:mmultiscripts></mml:math> for applications in metrology. Physical Review A, 2017, 96, .	2.5	10
76	Accurate measurement of the Sagnac effect for matter waves. Science Advances, 2022, 8, .	10.3	10
77	MIGA: combining laser and matter wave interferometry for mass distribution monitoring and advanced geodesy. Proceedings of SPIE, 2016, , .	0.8	9
78	Low noise amplification of an optically carried microwave signal: application to atom interferometry. Applied Physics B: Lasers and Optics, 2010, 101, 723-729.	2.2	8
79	Tailoring Multiloop Atom Interferometers with Adjustable Momentum Transfer. Physical Review Letters, 2020, 125, 213201.	7.8	6
80	GravimÃ¨tre Ã atomes froids. European Physical Journal Special Topics, 2004, 119, 153-154.	0.2	5
81	InterfÃ©romÃ¨tre Ã atomes froids : vers un gyromÃ¨tre-accÃ©lÃ©romÃ¨tre de grande sensibilitÃ©. European Physical Journal Special Topics, 2004, 119, 225-226.	0.2	4
82	Feedback control of coherent spin states using weak nondestructive measurements. Physical Review A, 2014, 89, .	2.5	3
83	Erratum to â€œThe Sagnac effect: 20 years of development in matter-wave interferometryâ€•[C. R. Physique 15 (10) (2014) 875â€“883]. Comptes Rendus Physique, 2015, 16, .	0.9	2
84	Cold-Atom-Based Commercial Microwave Clock at the 10^{âˆ'15} Level. , 2018, , .		2
85	Vibration Rejection on Atomic Gravimeter Signal Using a Seismometer. International Association of Geodesy Symposia, 2010, , 115-121.	0.4	2
86	COLD ATOM GYROSCOPE FOR PRECISION MEASUREMENTS. , 2004, , .		2
87	Cold strontium atoms for an optical frequency standard. IEEE Transactions on Instrumentation and Measurement, 2003, 52, 255-257.	4.7	1
88	Cold Atom Absolute Gravimeter for the Watt Balance. , 2004, , .		1
89	From Optical Lattice Clocks to the Measurement of Forces in the Casimir Regime. , 2006, , .		1
90	Continuous g monitoring with atom interferometry. , 2011, , .		1

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91	MiniAtom: Realization of an absolute compact atomic gravimeter. , 2013, , .		1
92	Cold-atom inertial sensor without deadtime. , 2016, , .		1
93	Interleaved Matter-Wave Gyroscope with 3 Ã— 10^{âˆ’10} rad.s^{âˆ’1} Stability. , 2018, , .		1
94	ATOM INTERFEROMETRY. NATO Science Series Series II, Mathematics, Physics and Chemistry, 2006, , 359-366.	0.1	1
95	Observation de la force de van der Waals dans le miroir Ã atomes. Annales De Physique, 1995, 20, 641-642.	0.2	1
96	Atom Interferometric Inertial Sensors for Space Applications. Astrophysics and Space Science Library, 2008, , 297-339.	2.7	1
97	Recoil effects in microwave atomic frequency standards: preliminary results. , 0, , .		0
98	Design of a cold atom source for a neutral strontium optical frequency standard. , 0, , .		0
99	A cold atom interferometer for high precision measurements. , 2003, , .		0
100	A cold atom interferometer for high precision inertial measurements. , 2004, , .		0
101	An /sup 87/Rb cold atom interferometric gravimeter. , 0, , .		0
102	Large-Bandwidth, Low-Noise Phase-Lock of External Cavity Diode Lasers for Atom Interferometers. , 2007, , .		0
103	Experimental limits of an inertial sensor based on cold atoms interferometry. , 2007, , .		0
104	Future Inertial Atomic Quantum Sensors: State of Art. , 2007, , .		0
105	CHARACTERIZATION OF A COLD ATOM GYROSCOPE. , 2009, , .		0
106	Comparison of 3 absolute gravimeters based on different methods for the e-MASS project. , 2010, , .		0
107	Continuous free fall acceleration determination for the LNE Watt balance. , 2014, , .		0
108	Phase locking an atom interferometer. , 2016, , .		0

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109	Degenerate optical resonator for the enhancement of large laser beams. Optics Express, 2020, 28, 39112.	3.4	0
110	Rotation rate measurements with a large area cold atom interferometer. , 2020, , .		0
111	High Stability Two Axis Cold-Atom Gyroscope. , 2022, , .		0