Fiodor Sorrentino

List of Publications by Year
in descending order

134 papers	39,292 citations	29994 54 h-index	17055 122 g-index
138 all docs	138 docs citations	138 times ranked	17571 citing authors

#	Article	IF	Citations
1	Observation of Gravitational Waves from a Binary Black Hole Merger. Physical Review Letters, 2016, 116, 061102.	2.9	8,753
2	GW170817: Observation of Gravitational Waves from a Binary Neutron Star Inspiral. Physical Review Letters, 2017, 119, 161101.	2.9	6,413
3	Multi-messenger Observations of a Binary Neutron Star Merger[*]. Astrophysical Journal Letters, 2017, 848, L12.	3.0	2,805
4	GW151226: Observation of Gravitational Waves from a 22-Solar-Mass Binary Black Hole Coalescence. Physical Review Letters, 2016, 116, 241103.	2.9	2,701
5	Gravitational Waves and Gamma-Rays from a Binary Neutron Star Merger: GW170817 and GRB 170817A. Astrophysical Journal Letters, 2017, 848, L13.	3.0	2,314
6	GW170104: Observation of a 50-Solar-Mass Binary Black Hole Coalescence at Redshift 0.2. Physical Review Letters, 2017, 118, 221101.	2.9	1,987
7	GW170814: A Three-Detector Observation of Gravitational Waves from a Binary Black Hole Coalescence. Physical Review Letters, 2017, 119, 141101.	2.9	1,600
8	Tests of General Relativity with GW150914. Physical Review Letters, 2016, 116, 221101.	2.9	1,224
9	Binary Black Hole Mergers in the First Advanced LIGO Observing Run. Physical Review X, 2016, 6, .	2.8	898
10	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
11	A gravitational-wave standard siren measurement of the Hubble constant. Nature, 2017, 551, 85-88.	13.7	674
12	Properties of the Binary Black Hole Merger GW150914. Physical Review Letters, 2016, 116, 241102.	2.9	673
13	ASTROPHYSICAL IMPLICATIONS OF THE BINARY BLACK HOLE MERGER GW150914. Astrophysical Journal Letters, 2016, 818, L22.	3.0	633
14	Precision measurement of the Newtonian gravitational constant using cold atoms. Nature, 2014, 510, 518-521.	13.7	499
15	GW150914: The Advanced LIGO Detectors in the Era of First Discoveries. Physical Review Letters, 2016, 116, 131103.	2.9	466
16	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
17	Prospects for Observing and Localizing Gravitational-Wave Transients with Advanced LIGO and Advanced Virgo. Living Reviews in Relativity, 2016, 19, 1.	8.2	427
18	GW150914: First results from the search for binary black hole coalescence with Advanced LIGO. Physical Review D, 2016, 93, .	1.6	315

#	Article	IF	Citations
19	GW150914: Implications for the Stochastic Gravitational-Wave Background from Binary Black Holes. Physical Review Letters, 2016, 116, 131102.	2.9	269
20	THE RATE OF BINARY BLACK HOLE MERGERS INFERRED FROM ADVANCED LIGO OBSERVATIONS SURROUNDING GW150914. Astrophysical Journal Letters, 2016, 833, L1.	3.0	230
21	Characterization of transient noise in Advanced LIGO relevant to gravitational wave signal GW150914. Classical and Quantum Gravity, 2016, 33, 134001.	1.5	225
22	Long-Lived Bloch Oscillations with Bosonic Sr Atoms and Application to Gravity Measurement at the Micrometer Scale. Physical Review Letters, 2006, 97, 060402.	2.9	214
23	LOCALIZATION AND BROADBAND FOLLOW-UP OF THE GRAVITATIONAL-WAVE TRANSIENT GW150914. Astrophysical Journal Letters, 2016, 826, L13.	3.0	210
24	Upper Limits on the Stochastic Gravitational-Wave Background from Advanced LIGOâ€™s First Observing Run. Physical Review Letters, 2017, 118, 121101.	2.9	194
25	AEDGE: Atomic Experiment for Dark Matter and Gravity Exploration in Space. EPJ Quantum Technology, 2020, 7, .	2.9	190
26	Sensitivity limits of a Raman atom interferometer as a gravity gradiometer. Physical Review A, 2014, 89, .	1.0	165
27	STE-QUESTâ€"test of the universality of free fall using cold atom interferometry. Classical and Quantum Gravity, 2014, 31, 115010.	1.5	159
28	Quantum tests of the Einstein Equivalence Principle with the STEâ€"QUEST space mission. Advances in Space Research, 2015, 55, 501-524.	1.2	151
29	Quantum test of the equivalence principle for atoms in coherent superposition of internal energy states. Nature Communications, 2017, 8, 15529.	5.8	149
30	UPPER LIMITS ON THE RATES OF BINARY NEUTRON STAR AND NEUTRON STARâ€"BLACK HOLE MERGERS FROM ADVANCED LIGOâ€™S FIRST OBSERVING RUN. Astrophysical Journal Letters, 2016, 832, L21.	3.0	146
31	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
32	First Search for Gravitational Waves from Known Pulsars with Advanced LIGO. Astrophysical Journal, 2017, 839, 12.	1.6	131
33	Observing gravitational-wave transient GW150914 with minimal assumptions. Physical Review D, 2016, 93, .	1.6	119
34	Improved Analysis of GW150914 Using a Fully Spin-Precessing Waveform Model. Physical Review X, 2016, 6, .	2.8	106
35	ModÃ¬: a new mobile instrument for in situ double-pulse LIBS analysis. Analytical and Bioanalytical Chemistry, 2006, 385, 240-247.	1.9	105
36	Measurement of the Gravity-Field Curvature by Atom Interferometry. Physical Review Letters, 2015, 114, 013001.	2.9	102

#	Article	IF	Citations
37	Directly comparing GW150914 with numerical solutions of Einsteinâ€™s equations for binary black hole coalescence. Physical Review D, 2016, 94, .	1.6	102
38	Effects of waveform model systematics on the interpretation of GW150914. Classical and Quantum Gravity, 2017, 34, 104002.	1.5	98
39	High-energy neutrino follow-up search of gravitational wave event GW150914 with ANTARES and IceCube. Physical Review D, 2016, 93, .	1.6	92
40	Precision gravimetry with atomic sensors. Measurement Science and Technology, 2009, 20, 022001.	1.4	87
41	Directional Limits on Persistent Gravitational Waves from Advanced LIGOâ€™s First Observing Run. Physical Review Letters, 2017, 118, 121102.	2.9	84
42	SAGE: A proposal for a space atomic gravity explorer. European Physical Journal D, 2019, 73, 1.	0.6	75
43	Search for intermediate mass black hole binaries in the first observing run of Advanced LIGO. Physical Review D, 2017, 96, .	1.6	73
44	All-sky search for short gravitational-wave bursts in the first Advanced LIGO run. Physical Review D, 2017, 95, .	1.6	69
45	The basic physics of the binary black hole merger GW150914. Annalen Der Physik, 2017, 529, 1600209.	0.9	69
46	Precision Gravity Tests with Atom Interferometry in Space. Nuclear Physics, Section B, Proceedings Supplements, 2013, 243-244, 203-217.	0.5	68
47	All-sky search for periodic gravitational waves in the O1 LIGO data. Physical Review D, 2017, 96, .	1.6	64
48	SUPPLEMENT: â€œTHE RATE OF BINARY BLACK HOLE MERGERS INFERRED FROM ADVANCED LIGO OBSERVATIONS SURROUNDING GW150914â€•(2016, ApJL, 833, L1). Astrophysical Journal, Supplement Series, 2016, 227, 14.	3.0	63
49	ELGARâ€”a European Laboratory for Gravitation and Atom-interferometric Research. Classical and Quantum Gravity, 2020, 37, 225017.	1.5	63
50	First targeted search for gravitational-wave bursts from core-collapse supernovae in data of first-generation laser interferometer detectors. Physical Review D, 2016, 94, .	1.6	60
51	Laser excitation of the<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>n</mml:mi><mml:mo>=</mml:mo><mml:mn>3</mml:mn></mml:mr of positronium for antihydrogen production. Physical Review A, 2016, 94, .	1.6	59
52	Search for gravitational waves from Scorpius X-1 in the first Advanced LIGO observing run with a hidden Markov model. Physical Review D, 2017, 95, .	1.6	59
53	Classification of wrought aluminum alloys by Artificial Neural Networks evaluation of Laser Induced Breakdown Spectroscopy spectra from aluminum scrap samples. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2017, 134, 52-57.	1.5	58
54	Precision gravity tests and the Einstein Equivalence Principle. Progress in Particle and Nuclear Physics, 2020, 112, 103772.	5.6	56

#	Article	IF	Citations
55	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
56	Potentiometric sensor for non invasive lactate determination in human sweat. Analytica Chimica Acta, 2017, 989, 80-87.	2.6	52
57	Simultaneous measurement of gravity acceleration and gravity gradient with an atom interferometer. Applied Physics Letters, 2012, 101, .	1.5	51
58	Quantum sensor for atom-surface interactions below<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mn>10</mml:mn><mml:mspace width="0.3em" /><mml:mi>Î¼</mml:mi><mml:mi mathvariant="normal">m</mml:mi></mml:mrow></mml:math>. Physical Review A, 2009, 79, .	1.0	48
59	A Compact Atom Interferometer for Future Space Missions. Microgravity Science and Technology, 2010, 22, 551-561.	0.7	48
60	Design of a dual species atom interferometer for space. Experimental Astronomy, 2015, 39, 167-206.	1.6	48
61	Upper Limits on Gravitational Waves from Scorpius X-1 from a Model-based Cross-correlation Search in Advanced LIGO Data. Astrophysical Journal, 2017, 847, 47.	1.6	46
62	Cooling and trapping of ultracold strontium isotopic mixtures. Physical Review A, 2005, 71, .	1.0	44
63	SUPPLEMENT: â€œLOCALIZATION AND BROADBAND FOLLOW-UP OF THE GRAVITATIONAL-WAVE TRANSIENT GW150914â€•(2016, ApJL, 826, L13). Astrophysical Journal, Supplement Series, 2016, 225, 8.	3.0	44
64	Calibration of advanced Virgo and reconstruction of the gravitational wave signal h (t) Tj ETQq0 0 0 rgBT /Overlock 10 Tf	1.5	41
65	Search for high-energy neutrinos from gravitational wave event GW151226 and candidate LVT151012 with ANTARES and IceCube. Physical Review D, 2017, 96, .	1.6	40
66	Sensitive gravity-gradiometry with atom interferometry: progress towards an improved determination of the gravitational constant. New Journal of Physics, 2010, 12, 095009.	1.2	39
67	Measuring the Newtonian constant of gravitation G with an atomic interferometer. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2014, 372, 20140030.	1.6	35
68	Comprehensive all-sky search for periodic gravitational waves in the sixth science run LIGO data. Physical Review D, 2016, 94, .	1.6	35
69	Positron bunching and electrostatic transport system for the production and emission of dense positronium clouds into vacuum. Nuclear Instruments & Methods in Physics Research B, 2015, 362, 86-92.	0.6	34
70	Results of the deepest all-sky survey for continuous gravitational waves on LIGO S6 data running on the Einstein@Home volunteer distributed computing project. Physical Review D, 2016, 94, .	1.6	31
71	Cooling of Sr to high phase-space density by laser and sympathetic cooling in isotopic mixtures. Physical Review A, 2006, 73, .	1.0	30
72	Matter wave explorer of gravity (MWXG). Experimental Astronomy, 2009, 23, 611-649.	1.6	30

#	Article	IF	Citations
73	Progress towards an unassisted element identification from Laser Induced Breakdown Spectra with automatic ranking techniques inspired by text retrieval. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2010, 65, 664-670.	1.5	29
74	All-sky search for long-duration gravitational wave transients with initial LIGO. Physical Review D, 2016, 93, .	1.6	29
75	LASER COOLING AND TRAPPING OF ATOMIC STRONTIUM FOR ULTRACOLD ATOMS PHYSICS, HIGH-PRECISION SPECTROSCOPY AND QUANTUM SENSORS. Modern Physics Letters B, 2006, 20, 1287-1320.	1.0	28
76	Fast analysis of complex metallic alloys by double-pulse time-integrated Laser-Induced Breakdown Spectroscopy. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2009, 64, 1068-1072.	1.5	28
77	Development of an erbium-doped fibre laser as a deep-sea hydrophone. Journal of Optics, 2006, 8, S535-S539.	1.5	26
78	Bragg interferometer for gravity gradient measurements. Physical Review A, 2016, 93, .	1.0	26
79	Frequency stabilization of a diode laser on the Cs D2 resonance line by the Zeeman effect in a vapor cell. Applied Physics B: Lasers and Optics, 2001, 73, 133-138.	1.1	23
80	MOCASS: A Satellite Mission Concept Using Cold Atom Interferometry for Measuring the Earth Gravity Field. Surveys in Geophysics, 2019, 40, 1029-1053.	2.1	23
81	Laser sources for precision spectroscopy on atomic strontium. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2006, 63, 981-986.	2.0	21
82	Producing long-lived <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mn>2</mml:mn><mml:msup><mml:mrow><mml:mspace width="0.16em" /></mml:mrow><mml:mn>3</mml:mn></mml:msup><mml:mi>S</mml:mi></mml:mrow></mml:math> positronium via <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mn>3</mml:mn><mml:msup><mml:mrow><mml:mspace	1.0	21
83	The Space Atom Interferometer project: status and prospects. Journal of Physics: Conference Series, 2011, 327, 012050.	0.3	20
84	Exploring the foundations of the physical universe with space tests of the equivalence principle. Experimental Astronomy, 2021, 51, 1695-1736.	1.6	20
85	An analog+digital phase-frequency detector for phase locking of a diode laser to an optical frequency comb. Quantum Electronics, 2004, 34, 559-564.	0.3	19
86	Search for continuous gravitational waves from neutron stars in globular cluster NGC 6544. Physical Review D, 2017, 95, .	1.6	19
87	Compression of a mixed antiproton and electron non-neutral plasma to high densities. European Physical Journal D, 2018, 72, 1.	0.6	17
88	Velocity-selected production of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mn>2</mml:mn><mml:mmultiscripts><mml:mi mathvariant="normal">S</mml:mi><mml:mprescripts /><mml:none /><mml:mrow><mml:mspace width="0.16em" /><mml:mn>3</mml:mn></mml:mrow></mml:mmultiscripts></mml:mrow></mml:math> metastable positronium. Physical Review A, 2019, 99, .	1.0	17
89	Coherent multiwave heterodyne frequency measurement of a far-infared laser by means of a femtosecond laser comb. Optics Letters, 2005, 30, 32.	1.7	16
90	Performances of â€˜G-Pisaâ€™: a middle size gyrolaser. Classical and Quantum Gravity, 2010, 27, 084033.	1.5	16

#	Article	IF	Citations
91	Laser-induced breakdown spectroscopy application to control of the process of precious metal recovery and recycling. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2012, 71-72, 123-126.	1.5	14
92	Search for transient gravitational waves in coincidence with short-duration radio transients during 2007â€“2013. Physical Review D, 2016, 93, .	1.6	14
93	iSense: A Portable Ultracold-Atom-Based Gravimeter. Procedia Computer Science, 2011, 7, 334-336.	1.2	11
94	Erbium-doped fiber lasers as deep-sea hydrophones. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2006, 567, 515-517.	0.7	9
95	Status of Advanced Virgo. EPJ Web of Conferences, 2018, 182, 02003.	0.1	9
96	Advanced Virgo Status. Journal of Physics: Conference Series, 2020, 1342, 012010.	0.3	9
97	AEDGE: Atomic experiment for dark matter and gravity exploration in space. Experimental Astronomy, 0, , 1.	1.6	9
98	AEgIS at ELENA: outlook for physics with a pulsed cold antihydrogen beam. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2018, 376, 20170274.	1.6	8
99	Prospect for a compact strontium optical lattice clock. , 2007, , .		7
100	Frequency noise performances of a Ti:sapphire optical frequency comb stabilized to an optical reference. Optics Communications, 2013, 291, 291-298.	1.0	7
101	Testing the Weak Equivalence Principle with an antimatter beam at CERN. Journal of Physics: Conference Series, 2015, 631, 012047.	0.3	7
102	Characterization of a transmission positron/positronium converter for antihydrogen production. Nuclear Instruments & Methods in Physics Research B, 2017, 407, 55-66.	0.6	7
103	The AEgIS experiment at CERN: measuring antihydrogen free-fall in earthâ€™s gravitational field to test WEP with antimatter. Journal of Physics: Conference Series, 2017, 791, 012014.	0.3	7
104	Measurementof the $ mathsf {4s^{2} {^{1}S_{0}} o 4s3d {^{1}D_{2}}}$ transition probability in calcium. European Physical Journal D, 2003, 23, 223-228.	0.6	6
105	Direct detection of antiprotons with the Timepix3 in a new electrostatic selection beamline. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2016, 831, 12-17.	0.7	6
106	Status of the Advanced Virgo gravitational wave detector. International Journal of Modern Physics A, 2017, 32, 1744003.	0.5	6
107	Measurements of Near-Infrared Frequency Mixing by Metalâ€“Semiconductor Point-Contact Diodes. IEEE Transactions on Instrumentation and Measurement, 2005, 54, 1407-1411.	2.4	5
108	Tuning of a high magnification compact parabolic telescope for centimeter-scale laser beams. Applied Optics, 2016, 55, 1275.	2.1	5

#	Article	IF	Citations
109	Positronium Rydberg excitation diagnostic in a 1T cryogenic environment. AIP Conference Proceedings, 2019, , .	0.3	5
110	Measurement of antiproton annihilation on Cu, Ag and Au with emulsion films. Journal of Instrumentation, 2017, 12, P04021-P04021.	0.5	4
111	Shallow bore-hole three-axial fiber Bragg grating strain sensor for Etna volcano monitoring. Review of Scientific Instruments, 2019, 90, 094501.	0.6	4
112	Imaging a positronium cloud in a 1 Tesla. EPJ Web of Conferences, 2019, 198, 00004.	0.1	4
113	Gravity and antimatter: the AEgIS experiment at CERN. Journal of Physics: Conference Series, 2020, 1342, 012016.	0.3	4
114	Towards the first measurement of matter-antimatter gravitational interaction. EPJ Web of Conferences, 2018, 182, 02040.	0.1	3
115	Automated source of squeezed vacuum states driven by finite state machine based software. Review of Scientific Instruments, 2021, 92, 054504.	0.6	3
116	Advances in Ps Manipulations and Laser Studies in the AEgIS Experiment. Acta Physica Polonica B, 2017, 48, 1583.	0.3	3
117	FIBER LASER HYDROPHONES AS PRESSURE SENSORS. International Journal of Modern Physics A, 2006, 21, 102-106.	0.5	2
118	Absolute gravity acceleration measurement in atomic sensor laboratories. European Physical Journal Plus, 2012, 127, 1.	1.2	2
119	Probing antimatter gravity â€“ The AEGIS experiment at CERN. EPJ Web of Conferences, 2016, 126, 02016.	0.1	2
120	Prospects for observing and localizing gravitational-wave transients with Advanced LIGO, Advanced Virgo and KAGRA. , 2018, 21, 1.		2
121	Precision measurements of gravity using cold atom sensors. Journal of the European Optical Society-Rapid Publications, 0, 4, .	0.9	1
122	PRINCIPLES OF GRAVITATIONAL WAVES DETECTION THROUGH ATOM INTERFEROMETRY. International Journal of Modern Physics Conference Series, 2013, 23, 135-143.	0.7	1
123	Precision Measurement of the Newtonian Gravitational Constant by Atom Interferometry. , 2016, , .		1
124	AEgÌ...IS latest results. EPJ Web of Conferences, 2018, 181, 01037.	0.1	1
125	Monte-Carlo simulation of positronium laser excitation and anti-hydrogen formation via charge exchange. Hyperfine Interactions, 2019, 240, 1.	0.2	1
126	The AEgIS experiment: towards antimatter gravity measurements. Journal of Physics: Conference Series, 2019, 1390, 012104.	0.3	1

#	Article	IF	Citations
127	G-Pisa gyrolaser. , 2009, , .		0
128	Precision measurement of the gravitational constant with atom interferometry. , 2013, , .		0
129	The Advanced Virgo interferometer. , 2016, , .		0
130	Antiproton tagging and vertex fitting in a Timepix3 detector. Journal of Instrumentation, 2018, 13, P06004-P06004.	0.5	0
131	Production of long-lived positronium states via laser excitation to 33P level. AIP Conference Proceedings, 2019, , .	0.3	0
132	Positronium for Antihydrogen Production in the AEGIS Experiment. Acta Physica Polonica A, 2017, 132, 1443-1449.	0.2	0
133	Can electrons neutralize the electrostatic charge on test mass mirrors in gravitational wave detectors?. Physical Review D, 2022, 105, .	1.6	0
134	Thermally controlled optical resonator for vacuum squeezed states separation. Applied Optics, 2022, 61, 5226.	0.9	0