

# Yannis K Semertzidis

## List of Publications by Year in descending order

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Version: 2024-02-01

113  
papers

7,752  
citations

136950

32  
h-index

49909

87  
g-index

117  
all docs

117  
docs citations

117  
times ranked

6316  
citing authors

#	ARTICLE	IF	CITATIONS
1	Final report of the E821 muon anomalous magnetic moment measurement at BNL. Physical Review D, 2006, 73, .	4.7	1,800
2	Measurement of the Positive Muon Anomalous Magnetic Moment to $0.46\text{Åppm}$ . Physical Review Letters, 2021, 126, 141801.	7.8	991
3	Measurement of the Negative Muon Anomalous Magnetic Moment to $0.7\text{Åppm}$ . Physical Review Letters, 2004, 92, 161802.	7.8	628
4	Precise Measurement of the Positive Muon Anomalous Magnetic Moment. Physical Review Letters, 2001, 86, 2227-2231.	7.8	489
5	Measurement of the Positive Muon Anomalous Magnetic Moment to $0.7\text{Åppm}$ . Physical Review Letters, 2002, 89, 101804.	7.8	378
6	Limits on the abundance and coupling of cosmic axions at $4.5 < m_a < 5.0 \hat{1}4\text{eV}$ . Physical Review Letters, 1987, 59, 839-842.	7.8	246
7	Improved limit on the muon electric dipole moment. Physical Review D, 2009, 80, .	4.7	215
8	New Method of Measuring Electric Dipole Moments in Storage Rings. Physical Review Letters, 2004, 93, 052001.	7.8	204
9	Conceptual design of the International Axion Observatory (IAXO). Journal of Instrumentation, 2014, 9, T05002-T05002.	1.2	201
10	Results of a laboratory search for cosmic axions and other weakly coupled light particles. Physical Review D, 1989, 40, 3153-3167.	4.7	182
11	Publisher's Note: Measurement of the Positive Muon Anomalous Magnetic Moment to $0.7\text{Åppm}$ [Phys. Rev. Lett.89, 101804 (2002)]. Physical Review Letters, 2002, 89, .	7.8	145
12	Axion Dark Matter Search around $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mn} \rangle 6.7 \langle \text{mml:mn} \rangle \langle \text{mml:mtext} \rangle \hat{\text{a}}\text{€}\% \langle \text{mml:mtext} \rangle \hat{\text{a}}\text{€}\% \langle \text{mml:mtext} \rangle \langle \text{mml:mi} \rangle \hat{1}4 \langle \text{mml:mi} \rangle \hat{1}4 \langle \text{mml:mtext} \rangle \hat{\text{a}}\text{€}\% \langle \text{mml:mtext} \rangle \hat{\text{a}}\text{€}\%$ . Physical Review Letters, 2020, 124, 101802.	7.8	96
13	Search for solar axions. Physical Review Letters, 1992, 69, 2333-2336.	7.8	114
14	A new approach for measuring the muon anomalous magnetic moment and electric dipole moment. Progress of Theoretical and Experimental Physics, 2019, 2019, .	6.6	112
15	Measurement of the anomalous precession frequency of the muon in the Fermilab Muon $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"} \rangle \langle \text{mml:mi} \rangle g \langle \text{mml:mi} \rangle \langle \text{mml:mo} \rangle \hat{\text{a}} \langle \text{mml:mo} \rangle \langle \text{mml:mn} \rangle 2 \langle \text{mml:mn} \rangle \langle \text{mml:math} \rangle$ Experiment. Physical Review D, 2021, 103, .	4.7	105
16	First Results from an Axion Haloscope at CAPP around $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mn} \rangle 10.7 \langle \text{mml:mn} \rangle \langle \text{mml:mtext} \rangle \hat{\text{a}}\text{€}\% \langle \text{mml:mtext} \rangle \hat{\text{a}}\text{€}\% \langle \text{mml:mtext} \rangle \hat{\text{a}}\text{€}\% \langle \text{mml:mtext} \rangle \hat{\text{a}}\text{€}\%$ . Physical Review Letters, 2021, 126, 191802.	7.8	96
17	Resonance Method of Electric-Dipole-Moment Measurements in Storage Rings. Physical Review Letters, 2006, 96, 214802.	7.8	88
18	New Measurement of the Anomalous Magnetic Moment of the Positive Muon. Physical Review Letters, 1999, 82, 1632-1635.	7.8	87

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19	High magnetic fields for fundamental physics. Physics Reports, 2018, 765-766, 1-39.	25.6	87
20	A storage ring experiment to detect a proton electric dipole moment. Review of Scientific Instruments, 2016, 87, 115116.	1.3	85
21	Search for Invisible Axion Dark Matter with a Multiple-Cell Haloscope. Physical Review Letters, 2020, 125, 221302.	7.8	83
22	Improved measurement of the positive muon anomalous magnetic moment. Physical Review D, 2000, 62, .	4.7	70
23	COMET Phase-I technical design report. Progress of Theoretical and Experimental Physics, 2020, 2020, .	6.6	66
24	Search for Lorentz and $C$ violation effects in muon spin precession. Physical Review Letters, 2008, 100, 091602.	7.8	57
25	Magnetic-field measurement and analysis for the Muon $g-2$ experiment at Fermilab. Physical Review A, 2021, 103, .	5.2	52
26	A New Method For A Sensitive Deuteron EDM Experiment. AIP Conference Proceedings, 2004, , .	0.4	52
27	Concept of multiple-cell cavity for axion dark matter search. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2018, 777, 412-419.	4.1	48
28	First results of the CAST-RADES haloscope search for axions at $34.67 \pm 0.4$ eV. Journal of High Energy Physics, 2021, 2021, 1.	4.7	43
29	Search for topological defect dark matter with a global network of optical magnetometers. Nature Physics, 2021, 17, 1396-1401.	16.7	42
30	Prospects for searching axionlike particle dark matter with dipole, toroidal, and wiggler magnets. Physical Review D, 2012, 85, .	4.7	41
31	The Brookhaven muon ( $g-2$ ) storage ring high voltage quadrupoles. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2003, 503, 458-484.	1.6	33
32	Revisiting the detection rate for axion haloscopes. Journal of Cosmology and Astroparticle Physics, 2020, 2020, 066-066.	5.4	33
33	Beam dynamics corrections to the Run-1 measurement of the muon anomalous magnetic moment at Fermilab. Physical Review Accelerators and Beams, 2021, 24, .	1.6	32
34	Measuring the polarization of a rapidly precessing deuteron beam. Physical Review Special Topics: Accelerators and Beams, 2014, 17, .	1.8	31
35	Storage ring probes of dark matter and dark energy. Physical Review D, 2021, 103, .	4.7	29
36	Phase-matching of multiple-cavity detectors for dark matter axion search. Astroparticle Physics, 2018, 97, 33-37.	4.3	28

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37	Axion dark matter: How to see it?. Science Advances, 2022, 8, eabm9928.	10.3	27
38	rf Wien filter in an electric dipole moment storage ring: The "partially frozen spin" effect. Physical Review Special Topics: Accelerators and Beams, 2013, 16, .	1.8	26
39	A fast non-ferric kicker for the muon ( $g-2$ ) experiment. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2003, 496, 8-25.	1.6	25
40	Correlation of Fe-Based Superconductivity and Electron-Phonon Coupling in an $\text{FeAsOxide}$ Heterostructure. Physical Review Letters, 2017, 119, 107003.	7.8	24
41	Axionlike dark matter search using the storage ring EDM method. Physical Review D, 2019, 99, .	4.7	24
42	First axion dark matter search with toroidal geometry. Physical Review D, 2017, 96, .	4.7	23
43	Analysis method for detecting topological defect dark matter with a global magnetometer network. Physics of the Dark Universe, 2020, 28, 100494.	4.9	23
44	Characterization of a flux-driven Josephson parametric amplifier with near quantum-limited added noise for axion search experiments. Superconductor Science and Technology, 2021, 34, 085013.	3.5	23
45	Effective approximation of electromagnetism for axion haloscope searches. Physics of the Dark Universe, 2019, 26, 100362.	4.9	18
46	The Measurement of the Anomalous Magnetic Moment of the Muon at Fermilab. Journal of Physical and Chemical Reference Data, 2015, 44, .	4.2	17
47	Electric dipole moments of fundamental particles. Nuclear Physics, Section B, Proceedings Supplements, 2004, 131, 244-251.	0.4	16
48	Exploiting higher-order resonant modes for axion haloscopes. Journal of Physics G: Nuclear and Particle Physics, 2020, 47, 035203.	3.6	16
49	Spin rotation by Earth's gravitational field in a "frozen-spin" ring. Physics Letters, Section A: General, Atomic and Solid State Physics, 2012, 376, 2822-2829.	2.1	15
50	Hybrid ring design in the storage-ring proton electric dipole moment experiment. Physical Review Accelerators and Beams, 2019, 22, .	1.6	15
51	Synchrotron oscillation effects on an rf-solenoid spin resonance. Physical Review Special Topics: Accelerators and Beams, 2012, 15, .	1.8	14
52	CAPP-8TB: Axion dark matter search experiment around $6.7 \text{ eV}$ . Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2021, 991, 161667.	1.6	14
53	Comprehensive hybrid ring design for a proton EDM experiment at below $10 \text{ cm}$ . Physical Review D, 2022, 105, .	1.7	14
54	Bosonic coherent motions in the Universe. Frontiers in Physics, 2014, 2, .	2.1	13

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55	Fringe electric fields of flat and cylindrical deflectors in electrostatic charged particle storage rings. <i>Physical Review Special Topics: Accelerators and Beams</i> , 2014, 17, .	1.8	13
56	Novel single shot scheme to measure submillimeter electron bunch lengths using electro-optic technique. <i>Physical Review Special Topics: Accelerators and Beams</i> , 2002, 5, .	1.8	12
57	Status of the 25 T, 100 mm Bore HTS Solenoid for an Axion Dark Matter Search Experiment. <i>IEEE Transactions on Applied Superconductivity</i> , 2019, 29, 1-5.	1.7	12
58	Cosmic axion force. <i>Physical Review D</i> , 2021, 104, .	4.7	12
59	Muon revolution frequency distribution from a partial-time Fourier transform of the $g-2$ signal in the muon $g-2$ experiment. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2002, 482, 767-775.	1.6	11
60	Review of EDM experiments. <i>Journal of Physics: Conference Series</i> , 2011, 335, 012012.	0.4	11
61	New method of probing an oscillating EDM induced by axionlike dark matter using an rf Wien filter in storage rings. <i>Physical Review D</i> , 2021, 104, .	4.7	11
62	Electro-optical measurements of picosecond bunch length of a 45 MeV electron beam. <i>Journal of Applied Physics</i> , 2001, 89, 4921-4926.	2.5	10
63	Results of precision particle simulations in an all-electric ring lattice using fourth-order Runge-Kutta integration. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2014, 743, 96-102.	1.6	10
64	Electric and magnetic energy at axion haloscopes. <i>Physical Review D</i> , 2016, 94, .	4.7	10
65	SQUID amplifiers for axion search experiments. <i>Cryogenics</i> , 2018, 91, 125-127.	1.7	10
66	Connection between zero chromaticity and long in-plane polarization lifetime in a magnetic storage ring. <i>Physical Review Accelerators and Beams</i> , 2018, 21, .	1.6	10
67	A sensitive search for a muon electric dipole moment. <i>AIP Conference Proceedings</i> , 2001, , .	0.4	9
68	The 11 years solar cycle as the manifestation of the dark Universe. <i>Modern Physics Letters A</i> , 2014, 29, 1440008.	1.2	9
69	Anomalous rf magnetoresistance in copper at 4 K. <i>Applied Physics Letters</i> , 1988, 52, 2266-2268.	3.3	8
70	A Design Study on a Multibillet HTS Induction Heater With REBCO Racetrack Coils. <i>IEEE Transactions on Applied Superconductivity</i> , 2019, 29, 1-5.	1.7	8
71	Bimodal Approach for Noise Figures of Merit Evaluation in Quantum-Limited Josephson Traveling Wave Parametric Amplifiers. <i>IEEE Transactions on Applied Superconductivity</i> , 2022, 32, 1-6.	1.7	8
72	Bi-axially Textured $\text{YBa}_2\text{Cu}_3\text{O}_7$ Microwave Cavity in a High Magnetic Field for a Dark-Matter Axion Search. <i>Physical Review Applied</i> , 2022, 17, .	1.8	8

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73	A Sensitive Search for a Muon Electric Dipole Moment. International Journal of Modern Physics A, 2001, 16, 690-693.	1.5	7
74	Improved axion haloscope search analysis. Journal of High Energy Physics, 2021, 2021, 1.	4.7	7
75	Development of Quantum Limited Superconducting Amplifiers for Advanced Detection. IEEE Transactions on Applied Superconductivity, 2022, 32, 1-5.	1.7	7
76	New laboratory technique for measuring the photon charge. Physical Review D, 2003, 67, .	4.7	6
77	Storage Ring EDM Experiments. EPJ Web of Conferences, 2016, 118, 01032.	0.3	6
78	The status of the Storage Ring EDM experiment. , 2009, , .		5
79	High-Field Solenoid Development for Axion Dark Matter Search at CAPP/IBS. IEEE Transactions on Applied Superconductivity, 2016, 26, 1-5.	1.7	5
80	Estimation of non-linearity in NMR polarization measurement. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1995, 356, 83-87.	1.6	4
81	A New Experiment to Measure the Muon Electric Dipole Moment. AIP Conference Proceedings, 2004, , .	0.4	4
82	Sensitivity improvement in hidden photon detection using resonant cavities. Physical Review D, 2021, 103, .	4.7	4
83	A method for controlling the magnetic field near a superconducting boundary in the ARIADNE axion experiment. Quantum Science and Technology, 2022, 7, 014002.	5.8	4
84	Magnetic and Electric Dipole Moments in Storage Rings. , 2008, , 97-113.		4
85	Reduction of coherent betatron oscillations in a muon $g-2$ storage ring experiment using RF fields. New Journal of Physics, 2020, 22, 063002.	2.9	4
86	Review of Electric Dipole Moments of Fundamental Particles. , 2009, , .		3
87	Spin and Beam Dynamics in the Muon ( $g-2$ ) Experiments. Journal of the Physical Society of Japan, 2016, 85, 091001.	1.6	3
88	Magnetic field effects on the proton EDM in a continuous all-electric storage ring. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2019, 927, 262-266.	1.6	3
89	Effect of light flash on photocathodes. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1997, 394, 7-12.	1.6	2
90	MUON $g-2$ EXPERIMENT AT BROOKHAVEN NATIONAL LABORATORY. International Journal of Modern Physics A, 2001, 16, 287-291.	1.5	2

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91	Recent results and current status of the muon $g-2$ experiment at BNL. Canadian Journal of Physics, 2002, 80, 1355-1364.	1.1	2
92	The IAXO Helioscope. Journal of Physics: Conference Series, 2015, 650, 012009.	0.4	2
93	Noise Temperature Measurements for Axion Haloscope Experiments at IBS/CAPP. Journal of Low Temperature Physics, 2020, 200, 472-478.	1.4	2
94	The Dark Universe Is Not Invisible. Physical Sciences Forum, 2021, 2, 10.	0.3	2
95	SQUID-based beam position monitor. , 2019, , .		2
96	CAPP-PACE Experiment with a Target Mass Range Around $10^{-4}eV$ . Springer Proceedings in Physics, 2020, , 83-87.	0.2	2
97	Electro-optical measurements of ultrashort 45 MeV electron beam bunch. International Journal of Modern Physics A, 2001, 16, 1150-1152.	1.5	1
98	Measurement of the muon anomalous magnetic moment to 0.7 ppm. Nuclear Physics, Section B, Proceedings Supplements, 2003, 117, 373-384.	0.4	1
99	The MECO Experiment at BNL. Nuclear Physics, Section B, Proceedings Supplements, 2005, 149, 372-374.	0.4	1
100	Development of SQUID Amplifiers for Axion Search Experiments. , 2019, , .		1
101	Analytical estimations of the chromaticity and corrections to the spin precession frequency in weak focusing magnetic storage rings. Physical Review Accelerators and Beams, 2022, 25, .	1.6	1
102	Analytical considerations for optimal axion haloscope design. Journal of Physics G: Nuclear and Particle Physics, 2022, 49, 055201.	3.6	1
103	First results from the new muon ( $g-2$ ) experiment. , 1999, , .		0
104	Status of the BNL muon ( $g-2$ ) experiment. IEEE Transactions on Instrumentation and Measurement, 1999, 48, 182-185.	4.7	0
105	The muon anomalous magnetic moment experiment at Brookhaven. AIP Conference Proceedings, 2001, , .	0.4	0
106	Precision measurement of the muon anomalous magnetic moment. AIP Conference Proceedings, 2002, , .	0.4	0
107	Summary of Working Group 4 - Intense Muon Physics -. Nuclear Physics, Section B, Proceedings Supplements, 2005, 149, 329-336.	0.4	0
108	Study By Spin Tracking of A Storage Ring For Deuteron Electric Dipole Moment. , 2009, , .		0

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109	Non-Collider Particle Physics Experiments. Journal of the Korean Physical Society, 2018, 73, 203-217.	0.7	0
110	Search for a Permanent EDM of Charged Particles Using Storage Rings. Advanced Series on Directions in High Energy Physics, 2009, , 655-682.	0.7	0
111	Improved Limits from the Galactic Axion Search. Astrophysics and Space Science Library, 1989, , 293-296.	2.7	0
112	Multiple-Cell Cavity for High Mass Axion Dark Matter Search. Springer Proceedings in Physics, 2020, , 131-137.	0.2	0
113	An implementation of spin-dependent hadron elastic scattering in GEANT4. Journal of the Korean Physical Society, 2022, 80, 437-446.	0.7	0