Karsten M Heeger

List of Publications by Year
in descending order

108 papers	9,023 citations	76326 40 h-index	38395 95 g-index
108 all docs	108 docs citations	108 times ranked	5132 citing authors

#	Article	IF	Citations
1	Observation of Electron-Antineutrino Disappearance at Daya Bay. Physical Review Letters, 2012, 108, 171803.	7.8	1,751
2	Precision Measurement of Neutrino Oscillation Parameters with KamLAND. Physical Review Letters, 2008, 100, 221803.	7.8	675
3	Measurement of the Total ActiveB8Solar Neutrino Flux at the Sudbury Neutrino Observatory with Enhanced Neutral Current Sensitivity. Physical Review Letters, 2004, 92, 181301.	7.8	654
4	Solar fusion cross sections. II. The<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>p</mml:mi><mml:mi>p</mml:mi></mml:math>chain and CNO cycles. Reviews of Modern Physics, 2011, 83, 195-245.	45.6	574
5	Solar fusion cross sections. Reviews of Modern Physics, 1998, 70, 1265-1291.	45.6	556
6	The Sudbury Neutrino Observatory. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2000, 449, 172-207.	1.6	369
7	Experimental investigation of geologically produced antineutrinos with KamLAND. Nature, 2005, 436, 499-503.	27.8	343
8	Independent Measurement of the Total Active<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mmultiscripts><mml:mi mathvariant="normal">B</mml:mi><mml:mprescripts /><mml:none /><mml:mn>8</mml:mn></mml:mmultiscripts></mml:math>Solar Neutrino Flux Using an Array of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"> [illegible] </mml:mi><mml:mprescripts /><mml:none	7.8	262
9	First Results from CUORE: A Search for Lepton Number Violation via <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mn>0</mml:mn><mml:mi>Î½</mml:mi><mml:mi>Î²</mml:mi><mml:mi>Î²</mml:mi></mml:mrow Decay of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mmultiscripts><mml:mrow><mml:mi>Te</mml:mi></mml:mrow><mml:mprescripts /><mml:none /><mml:mrow><mml:mn>130</mml:mn></mml:mrow></mml:mmultiscripts></mml:mrow><	7.8	246
10	Partial radiogenic heat model for Earth revealed by geoneutrino measurements. Nature Geoscience, 2011, 4, 647-651.	12.9	196
11	Search for Neutrinoless Double-Beta Decay of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mmultiscripts><mml:mrow><mml:mi>Te</mml:mi></mml:mrow><mml:mprescripts /><mml:none /><mml:mrow><mml:mn>130</mml:mn></mml:mrow></mml:mmultiscripts></mml:mrow></mml:math>with CUORE-0. Physical Review Letters, 2015, 115, 102502.	7.8	189
12	New Measurement of Antineutrino Oscillation with the Full Detector Configuration at Daya Bay. Physical Review Letters, 2015, 115, 111802.	7.8	176
13	Measurement of the Electron Antineutrino Oscillation with 1958 Days of Operation at Daya Bay. Physical Review Letters, 2018, 121, 241805.	7.8	168
14	Volume I. Introduction to DUNE. Journal of Instrumentation, 2020, 15, T08008-T08008.	1.2	168
15	Improved Limit on Neutrinoless Double-Beta Decay in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mmultiscripts><mml:mrow><mml:mo>â€‰</mml:mo><mml:mi>Te</mml:mi></mml:mrow><mml: /><mml:none /><mml:mrow><mml:mn>130</mml:mn></mml:mrow></mml:mmultiscripts></mml:mrow></mml:math> with CUORE. Physical Review Letters, 2020, 124, 122501.	7.8	133
16	Production of radioactive isotopes through cosmic muon spallation in KamLAND. Physical Review C, 2010, 81, .	2.9	132
17	Evolution of the Reactor Antineutrino Flux and Spectrum at Daya Bay. Physical Review Letters, 2017, 118, 251801.	7.8	129
18	A side-by-side comparison of Daya Bay antineutrino detectors. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2012, 685, 78-97.	1.6	121

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19	Determination of theÎ½eand totalB8solar neutrino fluxes using the Sudbury Neutrino Observatory Phase I data set. Physical Review C, 2007, 75, .	2.9	112
20	First Search for Short-Baseline Neutrino Oscillations at HFIR with PROSPECT. Physical Review Letters, 2018, 121, 251802.	7.8	99
21	SEARCH FOR EXTRATERRESTRIAL ANTINEUTRINO SOURCES WITH THE KamLAND DETECTOR. Astrophysical Journal, 2012, 745, 193.	4.5	88
22	Volume IV. The DUNE far detector single-phase technology. Journal of Instrumentation, 2020, 15, T08010-T08010.	1.2	86
23	Search for a Light Sterile Neutrino at Daya Bay. Physical Review Letters, 2014, 113, 141802.	7.8	79
24	Determining the neutrino mass with cyclotron radiation emission spectroscopyâ€”Project 8. Journal of Physics G: Nuclear and Particle Physics, 2017, 44, 054004.	3.6	78
25	The detector system of the Daya Bay reactor neutrino experiment. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2016, 811, 133-161.	1.6	75
26	Search for Majorana neutrinos exploiting millikelvin cryogenics with CUORE. Nature, 2022, 604, 53-58.	27.8	74
27	Limits on Active to Sterile Neutrino Oscillations from Disappearance Searches in the MINOS, Daya Bay, and Bugey-3 Experiments. Physical Review Letters, 2016, 117, 151801.	7.8	71
28	Production of a gadolinium-loaded liquid scintillator for the Daya Bay reactor neutrino experiment. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2014, 763, 82-88.	1.6	68
29	Validation of techniques to mitigate copper surface contamination in CUORE. Astroparticle Physics, 2013, 45, 13-22.	4.3	66
30	Improved Search for a Light Sterile Neutrino with the Full Configuration of the Daya Bay Experiment. Physical Review Letters, 2016, 117, 151802.	7.8	65
31	CUORE-0 detector: design, construction and operation. Journal of Instrumentation, 2016, 11, P07009-P07009.	1.2	64
32	A Search for Neutrinos from the SolarhepReaction and the Diffuse Supernova Neutrino Background with the Sudbury Neutrino Observatory. Astrophysical Journal, 2006, 653, 1545-1551.	4.5	63
33	CUORE crystal validation runs: Results on radioactive contamination and extrapolation to CUORE background. Astroparticle Physics, 2012, 35, 839-849.	4.3	62
34	Search for periodicities in theB8solar neutrino flux measured by the Sudbury Neutrino Observatory. Physical Review D, 2005, 72, .	4.7	54
35	Probability of a Solution to the Solar Neutrino Problem within the Minimal Standard Model. Physical Review Letters, 1996, 77, 3720-3723.	7.8	53
36	The PROSPECT physics program. Journal of Physics G: Nuclear and Particle Physics, 2016, 43, 113001.	3.6	53

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37	Search for the Invisible Decay of Neutrons with KamLAND. Physical Review Letters, 2006, 96, 101802.	7.8	50
38	An array of low-background 3He proportional counters for the Sudbury Neutrino Observatory. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2007, 579, 1054-1080.	1.6	50
39	Extraction of the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mmultiscripts><mml:mrow><mml:mi mathvariant="normal">U</mml:mi></mml:mrow><mml:mprescripts /><mml:none /><mml:mrow><mml:mn>235</mml:mn></mml:mrow></mml:mmultiscripts></mml:mrow></mml:math> and <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mmultiscripts><mml:mrow><mml:mi>Pu</mml:mi></mml:mrow><mml:mprescripts	7.8	47
40	Measurement of the cosmic ray and neutrino-induced muon flux at the Sudbury neutrino observatory. Physical Review D, 2009, 80, .	4.7	42
41	Constraints on Nucleon Decay via Invisible Modes from the Sudbury Neutrino Observatory. Physical Review Letters, 2004, 92, 102004.	7.8	40
42	The PROSPECT reactor antineutrino experiment. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2019, 922, 287-309.	1.6	40
43	Measurement of the Antineutrino Spectrum from <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mmultiscripts><mml:mrow><mml:mi mathvariant="normal">U</mml:mi></mml:mrow><mml:mprescripts /><mml:none /><mml:mrow><mml:mn>235</mml:mn></mml:mrow></mml:mmultiscripts></mml:mrow></mml:math> Fission at HFIR with PROSPECT. Physical Review Letters, 2019, 122, 251801.	7.8	39
44	The muon system of the Daya Bay Reactor antineutrino experiment. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2015, 773, 8-20.	1.6	33
45	Constraining the leading weak axial two-body current by recent solar neutrino flux data. Physical Review C, 2003, 67, .	2.9	30
46	Measurement of the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mn>2</mml:mn><mml:mi>Î½</mml:mi><mml:mi>Î²</mml:mi><mml:mi>Î²</mml:mi></mml:math> Decay Half-Life of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mmultiscripts><mml:mrow><mml:mi>Te</mml:mi></mml:mrow><mml:mprescripts /><mml:none /><mml:mrow><mml:mn>130</mml:mn></mml:mrow></mml:mmultiscripts></mml:mrow></mml:math>	7.8	29
47	The KamLAND full-volume calibration system. Journal of Instrumentation, 2009, 4, P04017-P04017.	1.2	27
48	A search for the dark matter annual modulation in South Pole ice. Astroparticle Physics, 2012, 35, 749-754.	4.3	25
49	Volume III. DUNE far detector technical coordination. Journal of Instrumentation, 2020, 15, T08009-T08009.	1.2	25
50	Performance of a segmented ⁶Li-loaded liquid scintillator detector for the PROSPECT experiment. Journal of Instrumentation, 2018, 13, P06023-P06023.	1.2	23
51	Background radiation measurements at high power research reactors. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2016, 806, 401-419.	1.6	22
52	A high precision calibration of the nonlinear energy response at Daya Bay. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2019, 940, 230-242.	1.6	21
53	Light collection and pulse-shape discrimination in elongated scintillator cells for the PROSPECT reactor antineutrino experiment. Journal of Instrumentation, 2015, 10, P11004-P11004.	1.2	19
54	Lithium-loaded liquid scintillator production for the PROSPECT experiment. Journal of Instrumentation, 2019, 14, P03026-P03026.	1.2	16

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55	A CUPID Li₂¹⁰⁰MoO₄ scintillating bolometer tested in the CROSS underground facility. Journal of Instrumentation, 2021, 16, P02037-P02037.	1.2	16
56	CUORE opens the door to tonne-scale cryogenics experiments. Progress in Particle and Nuclear Physics, 2022, 122, 103902.	14.4	16
57	The low energy spectrum of TeO₂bolometers: results and dark matter perspectives for the CUORE-0 and CUORE experiments. Journal of Cosmology and Astroparticle Physics, 2013, 2013, 038-038.	5.4	15
58	The detector calibration system for the CUORE cryogenic bolometer array. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2017, 844, 32-44.	1.6	14
59	The CUORE Detector and Results. Journal of Low Temperature Physics, 2020, 199, 519-528.	1.4	14
60	Acrylic target vessels for a high-precision measurement of Î¸13with the Daya Bay antineutrino detectors. Journal of Instrumentation, 2012, 7, P06004-P06004.	1.2	13
61	Seasonal variation of the underground cosmic muon flux observed at Daya Bay. Journal of Cosmology and Astroparticle Physics, 2018, 2018, 001-001.	5.4	12
62	Neutral current and day night measurements from the pure D2O phase of SNO. Nuclear Physics, Section B, Proceedings Supplements, 2003, 118, 3-14.	0.4	11
63	A compact ultra-clean system for deploying radioactive sources inside the KamLAND detector. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2015, 769, 88-96.	1.6	11
64	Laboratory studies on the removal of radon-born lead from KamLAND×³s organic liquid scintillator. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2015, 769, 79-87.	1.6	11
65	Study of rare nuclear processes with CUORE. International Journal of Modern Physics A, 2018, 33, 1843002.	1.5	11
66	Joint Measurement of the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mmultiscripts><mml:mrow><mml:mi mathvariant="normal">U</mml:mi></mml:mrow><mml:mprescripts /><mml:none /><mml:mrow><mml:mn>235</mml:mn></mml:mrow></mml:mmultiscripts></mml:mrow></mml:math> Antineutrino Spectrum by PROSPECT and STEREO. Physical Review Letters, 2022, 128, 081802.	7.8	11
67	High-voltage microdischarge in ultra-low background /sup 3/He proportional counters. IEEE Transactions on Nuclear Science, 2000, 47, 1829-1833.	2.0	10
68	CUORE EXPERIMENT: THE SEARCH FOR NEUTRINOLESS DOUBLE BETA DECAY. International Journal of Modern Physics A, 2008, 23, 3395-3398.	1.5	10
69	A low mass optical grid for the PROSPECT reactor antineutrino detector. Journal of Instrumentation, 2019, 14, P04014-P04014.	1.2	10
70	Low-background /sup 3/He proportional counters for use in the Sudbury neutrino observatory. IEEE Transactions on Nuclear Science, 1999, 46, 873-876.	2.0	8
71	UV degradation of the optical properties of acrylic for neutrino and dark matter experiments. Journal of Instrumentation, 2009, 4, T09001-T09001.	1.2	8
72	Status of the Cryogen-Free Cryogenic System for the CUORE Experiment. Journal of Low Temperature Physics, 2012, 167, 528-534.	1.4	8

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73	Assembly and Installation of the Daya Bay Antineutrino Detectors. Journal of Instrumentation, 2013, 8, T11006-T11006.	1.2	8
74	The CUORICINO and CUORE double beta decay experiments. Progress in Particle and Nuclear Physics, 2006, 57, 203-216.	14.4	7
75	Neutrino-Based Tools for Nuclear Verification and Diplomacy in North Korea. Science and Global Security, 2019, 27, 15-28.	0.3	7
76	Low-background monitoring cameras for the Daya Bay Antineutrino Detectors. Journal of Instrumentation, 2012, 7, P08005-P08005.	1.2	6
77	Daya Bay Antineutrino Detector gas system. Journal of Instrumentation, 2012, 7, P11029-P11029.	1.2	5
78	Results from the Cuore Experiment â€. Universe, 2019, 5, 10.	2.5	5
79	Resolving the solar neutrino problem: Evidence for massive neutrinos in the Sudbury Neutrino Observatory. Europhysics News, 2001, 32, 180-183.	0.3	4
80	The Daya Bay antineutrino detector filling system and liquid mass measurement. Journal of Instrumentation, 2013, 8, P09015-P09015.	1.2	4
81	Target mass monitoring and instrumentation in the Daya Bay antineutrino detectors. Journal of Instrumentation, 2013, 8, T04001-T04001.	1.2	4
82	Status of the CUORE and results from the CUORE-0 neutrinoless double beta decay experiments. Nuclear and Particle Physics Proceedings, 2016, 273-275, 1719-1725.	0.5	4
83	Locust: C++ software for simulation of RF detection. New Journal of Physics, 2019, 21, 113051.	2.9	4
84	Long-term testing and properties of acrylic for the Daya Bay antineutrino detectors. Journal of Instrumentation, 2012, 7, T08001-T08001.	1.2	3
85	Leakage tests of the stainless steel vessels of the antineutrino detectors in the Daya Bay reactor neutrino experiment. Science China Technological Sciences, 2013, 56, 148-151.	4.0	3
86	The radioactive source calibration system of the PROSPECT reactor antineutrino detector. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2019, 944, 162465.	1.6	3
87	An active-shield method for the reduction of surface contamination in CUORE. AIP Conference Proceedings, 2007, , .	0.4	2
88	Dark Matter Search with CUORE-0 and CUORE. Physics Procedia, 2015, 61, 13-20.	1.2	2
89	CUORE and Beyond: Bolometric Techniques to Explore Inverted Neutrino Mass Hierarchy. Physics Procedia, 2015, 61, 241-250.	1.2	2
90	Results of CUORE-0 and prospects for the CUORE experiment. Nuclear and Particle Physics Proceedings, 2015, 265-266, 73-76.	0.5	2

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91	The CUORE cryostat and its bolometric detector. Journal of Instrumentation, 2017, 12, C02055-C02055.	1.2	2
92	CUORE: The first bolometric experiment at the ton scale for the search for neutrino-less double beta decay. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2020, 958, 162440.	1.6	2
93	A model independent analysis of the solar neutrino anomaly. Progress in Particle and Nuclear Physics, 1998, 40, 135-136.	14.4	1
94	The low-temperature energy calibration system for the CUORE bolometer array. , 2009, , .		1
95	First CUORE-0 Performance Results and Status of CUORE Experiment. Journal of Low Temperature Physics, 2014, 176, 986-994.	1.4	1
96	First data from CUORE-0. Physics Procedia, 2015, 61, 289-294.	1.2	1
97	EVIDENCE FOR NEUTRINO MASS: A DECADE OF DISCOVERY. , 2005, , .		1
98	High-voltage micro discharge in ultra-low background /sup 3/He proportional counters. , 0, , .		0
99	Background studies for the neutral current detector array in the Sudbury Neutrino Observatory. Nuclear Physics, Section B, Proceedings Supplements, 2000, 87, 502-503.	0.4	0
100	The Future of Reactor Neutrino Experiments A Novel Approach to Measuring Î¸13. AIP Conference Proceedings, 2004, , .	0.4	0
101	Measurement of Î¸13 with reactor neutrinos. Nuclear Physics, Section B, Proceedings Supplements, 2005, 138, 330-332.	0.4	0
102	Passive Shielding in CUORE. AIP Conference Proceedings, 2007, , .	0.4	0
103	Results from the Daya Bay Reactor Neutrino Experiment. Nuclear Physics, Section B, Proceedings Supplements, 2014, 246-247, 18-22.	0.4	0
104	CUORE: The first bolometric experiment at the ton scale for rare decay searches. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2019, 936, 158-161.	1.6	0
105	TOWARDS A PRECISION MEASUREMENT OF Î¸13 WITH REACTOR NEUTRINOS: INITIATIVES IN THE UNITED STATES. , 2005, , .		0
106	CUORE: first results and prospects. , 2018, , .		0
107	The commissioning of the CUORE experiment: the mini-tower run. , 2018, , .		0
108	Results from the CUORE experiment. , 2018, , .		0