# Lu Lu

List of Publications by Year
in descending order



| | | | |
|---|---|---|---|
| 112 papers | 7,878 citations | 44069 48 h-index | 49909 87 g-index |
| 114 all docs | 114 docs citations | 114 times ranked | 7436 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Multimessenger observations of a flaring blazar coincident with high-energy neutrino IceCube-170922A. Science, 2018, 361, . | 12.6 | 654 |
| 2 | Neutrino emission from the direction of the blazar TXS 0506+056 prior to the IceCube-170922A alert. Science, 2018, 361, 147-151. | 12.6 | 601 |
| 3 | The IceCube Neutrino Observatory: instrumentation and online systems. Journal of Instrumentation, 2017, 12, P03012-P03012. | 1.2 | 390 |
| 4 | OBSERVATION AND CHARACTERIZATION OF A COSMIC MUON NEUTRINO FLUX FROM THE NORTHERN HEMISPHERE USING SIX YEARS OF ICECUBE DATA. Astrophysical Journal, 2016, 833, 3. | 4.5 | 336 |
| 5 | Depth of maximum of air-shower profiles at the Pierre Auger Observatory. I. Measurements at energies above<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mn>1</mml:mn><mml:msup><mml:mrow><mml:mn>0</mml:mn></mml:mrow><mml:mrow><mml:m Physical Review D, 2014, 90, . | 4.7 | 266 |
| 6 | Time-Integrated Neutrino Source Searches with 10ÂYears of IceCube Data. Physical Review Letters, 2020, 124, 051103. | 7.8 | 221 |
| 7 | Depth of maximum of air-shower profiles at the Pierre Auger Observatory. II. Composition implications. Physical Review D, 2014, 90, . | 4.7 | 213 |
| 8 | Measurement of the Proton-Air Cross Section at<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msqrt><mml:mi>s</mml:mi></mml:msqrt><mml:mo mathvariant="bold">=</mml:mo><mml:mn>57</mml:mn><mml:mtext>â€‰</mml:mtext><mml:mtext>â€‰</mml:mtext><mml:mi>T the Pierre Auger Observatory. Physical Review Letters, 2012, 109, 062002. | 7.8 | 212 |
| 9 | IceCube-Gen2: the window to the extreme Universe. Journal of Physics G: Nuclear and Particle Physics, 2021, 48, 060501. | 3.6 | 204 |
| 10 | All-sky Search for Time-integrated Neutrino Emission from Astrophysical Sources with 7 yr of IceCube Data. Astrophysical Journal, 2017, 835, 151. | 4.5 | 198 |
| 11 | THE CONTRIBUTION OF FERMI-2LAC BLAZARS TO DIFFUSE TEVâ€“PEV NEUTRINO FLUX. Astrophysical Journal, 2017, 835, 45. | 4.5 | 186 |
| 12 | Muons in air showers at the Pierre Auger Observatory: Mean number in highly inclined events. Physical Review D, 2015, 91, . | 4.7 | 152 |
| 13 | SEARCHES FOR ANISOTROPIES IN THE ARRIVAL DIRECTIONS OF THE HIGHEST ENERGY COSMIC RAYS DETECTED BY THE PIERRE AUGER OBSERVATORY. Astrophysical Journal, 2015, 804, 15. | 4.5 | 146 |
| 14 | IceCube high-energy starting event sample: Description and flux characterization with 7.5Âyears of data. Physical Review D, 2021, 104, . | 4.7 | 142 |
| 15 | Searches for Sterile Neutrinos with the IceCube Detector. Physical Review Letters, 2016, 117, 071801. | 7.8 | 140 |
| 16 | Characteristics of the Diffuse Astrophysical Electron and Tau Neutrino Flux with Six Years of IceCube High Energy Cascade Data. Physical Review Letters, 2020, 125, 121104. | 7.8 | 137 |
| 17 | Differential limit on the extremely-high-energy cosmic neutrino flux in the presence of astrophysical background from nine years of IceCube data. Physical Review D, 2018, 98, . | 4.7 | 131 |
| 18 | Improved limit to the diffuse flux of ultrahigh energy neutrinos from the Pierre Auger Observatory. Physical Review D, 2015, 91, . | 4.7 | 125 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | The IceCube realtime alert system. Astroparticle Physics, 2017, 92, 30-41. | 4.3 | 116 |
| 20 | Extending the Search for Muon Neutrinos Coincident with Gamma-Ray Bursts in IceCube Data. Astrophysical Journal, 2017, 843, 112. | 4.5 | 116 |
| 21 | Constraints on Ultrahigh-Energy Cosmic-Ray Sources from a Search for Neutrinos above 10ÂPeV with IceCube. Physical Review Letters, 2016, 117, 241101. | 7.8 | 111 |
| 22 | Search for annihilating dark matter in the Sun with 3Âyears of IceCube data. European Physical Journal C, 2017, 77, 1. | 3.9 | 111 |
| 23 | AN ALL-SKY SEARCH FOR THREE FLAVORS OF NEUTRINOS FROM GAMMA-RAY BURSTS WITH THE ICECUBE NEUTRINO OBSERVATORY. Astrophysical Journal, 2016, 824, 115. | 4.5 | 109 |
| 24 | Antennas for the detection of radio emission pulses from cosmic-ray induced air showers at the Pierre Auger Observatory. Journal of Instrumentation, 2012, 7, P10011-P10011. | 1.2 | 95 |
| 25 | Constraints on Galactic Neutrino Emission with Seven Years of IceCube Data. Astrophysical Journal, 2017, 849, 67. | 4.5 | 95 |
| 26 | Measurement of Atmospheric Neutrino Oscillations at 6â€“56ÂGeV with IceCube DeepCore. Physical Review Letters, 2018, 120, 071801. | 7.8 | 88 |
| 27 | Detection of a particle shower at the Glashow resonance with IceCube. Nature, 2021, 591, 220-224. | 27.8 | 86 |
| 28 | Probing the radio emission from air showers with polarization measurements. Physical Review D, 2014, 89, . | 4.7 | 85 |
| 29 | Cosmic ray spectrum and composition from PeV to EeV using 3Âyears of data from IceTop and IceCube. Physical Review D, 2019, 100, . | 4.7 | 76 |
| 30 | Search for sterile neutrino mixing using three years of IceCube DeepCore data. Physical Review D, 2017, 95, . | 4.7 | 75 |
| 31 | Search for steady point-like sources in the astrophysical muon neutrino flux with 8 years of IceCube data. European Physical Journal C, 2019, 79, 1. | 3.9 | 75 |
| 32 | SEARCHES FOR LARGE-SCALE ANISOTROPY IN THE ARRIVAL DIRECTIONS OF COSMIC RAYS DETECTED ABOVE ENERGY OF 10<sup>19</sup>eV AT THE PIERRE AUGER OBSERVATORY AND THE TELESCOPE ARRAY. Astrophysical Journal, 2014, 794, 172. | 4.5 | 72 |
| 33 | ANISOTROPY IN COSMIC-RAY ARRIVAL DIRECTIONS IN THE SOUTHERN HEMISPHERE BASED ON SIX YEARS OF DATA FROM THE ICECUBE DETECTOR. Astrophysical Journal, 2016, 826, 220. | 4.5 | 72 |
| 34 | Muons in air showers at the Pierre Auger Observatory: Measurement of atmospheric production depth. Physical Review D, 2014, 90, . | 4.7 | 69 |
| 35 | CONSTRAINTS ON THE ORIGIN OF COSMIC RAYS ABOVE 10 <sup>18</sup> eV FROM LARGE-SCALE ANISOTROPY SEARCHES IN DATA OF THE PIERRE AUGER OBSERVATORY. Astrophysical Journal Letters, 2013, 762, L13. | 8.3 | 67 |
| 36 | Improved Characterization of the Astrophysical Muonâ€“neutrino Flux with 9.5 Years of IceCube Data. Astrophysical Journal, 2022, 928, 50. | 4.5 | 67 |

| # | Article | IF | Citations |
|---|---|---|---|
| 37 | Description of atmospheric conditions at the Pierre Auger Observatory using the Global Data Assimilation System (GDAS). Astroparticle Physics, 2012, 35, 591-607. | 4.3 | 66 |
| 38 | Search for neutrinos from dark matter self-annihilations in the center of the Milky Way with 3 years of IceCube/DeepCore. European Physical Journal C, 2017, 77, 1. | 3.9 | 62 |
| 39 | Search for neutrinos from decaying dark matter with IceCube. European Physical Journal C, 2018, 78, 831. | 3.9 | 62 |
| 40 | Investigation of Two Fermi-LAT Gamma-Ray Blazars Coincident with High-energy Neutrinos Detected by IceCube. Astrophysical Journal, 2019, 880, 103. | 4.5 | 60 |
| 41 | eV-Scale Sterile Neutrino Search Using Eight Years of Atmospheric Muon Neutrino Data from the IceCube Neutrino Observatory. Physical Review Letters, 2020, 125, 141801. | 7.8 | 57 |
| 42 | Improved limits on dark matter annihilation in the Sun with the 79-string IceCube detector and implications for supersymmetry. Journal of Cosmology and Astroparticle Physics, 2016, 2016, 022-022. | 5.4 | 56 |
| 43 | SEARCH FOR POINT-LIKE SOURCES OF ULTRA-HIGH ENERGY NEUTRINOS AT THE PIERRE AUGER OBSERVATORY AND IMPROVED LIMIT ON THE DIFFUSE FLUX OF TAU NEUTRINOS. Astrophysical Journal Letters, 2012, 755, L4. | 8.3 | 55 |
| 44 | Measurements using the inelasticity distribution of multi-TeV neutrino interactions in IceCube. Physical Review D, 2019, 99, . | 4.7 | 55 |
| 45 | Search for Sources of Astrophysical Neutrinos Using Seven Years of IceCube Cascade Events. Astrophysical Journal, 2019, 886, 12. | 4.5 | 53 |
| 46 | Measurement of atmospheric tau neutrino appearance with IceCube DeepCore. Physical Review D, 2019, 99, . | 4.7 | 53 |
| 47 | Search for ultrahigh energy neutrinos in highly inclined events at the Pierre Auger Observatory. Physical Review D, 2011, 84, . | 4.7 | 51 |
| 48 | LARGE SCALE DISTRIBUTION OF ULTRA HIGH ENERGY COSMIC RAYS DETECTED AT THE PIERRE AUGER OBSERVATORY WITH ZENITH ANGLES UP TO 80Â°. Astrophysical Journal, 2015, 802, 111. | 4.5 | 49 |
| 49 | THE FIRST COMBINED SEARCH FOR NEUTRINO POINT-SOURCES IN THE SOUTHERN HEMISPHERE WITH THE ANTARES AND ICECUBE NEUTRINO TELESCOPES. Astrophysical Journal, 2016, 823, 65. | 4.5 | 49 |
| 50 | PINGU: a vision for neutrino and particle physics at the South Pole. Journal of Physics G: Nuclear and Particle Physics, 2017, 44, 054006. | 3.6 | 45 |
| 51 | LARGE-SCALE DISTRIBUTION OF ARRIVAL DIRECTIONS OF COSMIC RAYS DETECTED ABOVE 10<sup>18</sup> eV AT THE PIERRE AUGER OBSERVATORY. Astrophysical Journal, Supplement Series, 2012, 203, 34. | 7.7 | 44 |
| 52 | Search for astrophysical tau neutrinos in three years of IceCube data. Physical Review D, 2016, 93, . | 4.7 | 44 |
| 53 | Ultrahigh Energy Neutrinos at the Pierre Auger Observatory. Advances in High Energy Physics, 2013, 2013, 1-18. | 1.1 | 39 |
| 54 | All-flavour search for neutrinos from dark matter annihilations in the Milky Way with IceCube/DeepCore. European Physical Journal C, 2016, 76, 1. | 3.9 | 37 |

| # | Article | IF | Citations |
|---|---|---|---|
| 55 | Searching for eV-scale sterile neutrinos with eight years of atmospheric neutrinos at the IceCube Neutrino Telescope. Physical Review D, 2020, 102, . | 4.7 | 34 |
| 56 | Multiwavelength follow-up of a rare IceCube neutrino multiplet. Astronomy and Astrophysics, 2017, 607, A115. | 5.1 | 33 |
| 57 | Search for signatures of magnetically-induced alignment in the arrival directions measured by the Pierre Auger Observatory. Astroparticle Physics, 2012, 35, 354-361. | 4.3 | 32 |
| 58 | All-sky Measurement of the Anisotropy of Cosmic Rays at 10 TeV and Mapping of the Local Interstellar Magnetic Field. Astrophysical Journal, 2019, 871, 96. | 4.5 | 32 |
| 59 | IceCube Search for Neutrinos Coincident with Compact Binary Mergers from LIGO-Virgoâ€™s First Gravitational-wave Transient Catalog. Astrophysical Journal Letters, 2020, 898, L10. | 8.3 | 30 |
| 60 | A SEARCH FOR POINT SOURCES OF EeV PHOTONS. Astrophysical Journal, 2014, 789, 160. | 4.5 | 29 |
| 61 | Searches for relativistic magnetic monopoles in IceCube. European Physical Journal C, 2016, 76, 1. | 3.9 | 29 |
| 62 | A convolutional neural network based cascade reconstruction for the IceCube Neutrino Observatory. Journal of Instrumentation, 2021, 16, P07041. | 1.2 | 29 |
| 63 | A SEARCH FOR POINT SOURCES OF EeV NEUTRONS. Astrophysical Journal, 2012, 760, 148. | 4.5 | 27 |
| 64 | LOWERING ICECUBE'S ENERGY THRESHOLD FOR POINT SOURCE SEARCHES IN THE SOUTHERN SKY. Astrophysical Journal Letters, 2016, 824, L28. | 8.3 | 27 |
| 65 | Combined sensitivity to the neutrino mass ordering with JUNO, the IceCube Upgrade, and PINGU. Physical Review D, 2020, 101, . | 4.7 | 25 |
| 66 | Measurement of the $$u _{mu }$$ Î½ Î¼ energy spectrum with IceCube-79. European Physical Journal C, 2017, 77, 692. | 3.9 | 24 |
| 67 | Search for nonstandard neutrino interactions with IceCube DeepCore. Physical Review D, 2018, 97, . | 4.7 | 23 |
| 68 | Constraints on Minute-Scale Transient Astrophysical Neutrino Sources. Physical Review Letters, 2019, 122, 051102. | 7.8 | 23 |
| 69 | A Search for Neutrino Emission from Fast Radio Bursts with Six Years of IceCube Data. Astrophysical Journal, 2018, 857, 117. | 4.5 | 22 |
| 70 | Search for Astrophysical Sources of Neutrinos Using Cascade Events in IceCube. Astrophysical Journal, 2017, 846, 136. | 4.5 | 21 |
| 71 | IceCube Search for High-energy Neutrino Emission from TeV Pulsar Wind Nebulae. Astrophysical Journal, 2020, 898, 117. | 4.5 | 21 |
| 72 | First search for dark matter annihilations in the Earth with the IceCube detector. European Physical Journal C, 2017, 77, 1. | 3.9 | 20 |

| # | Article | IF | Citations |
|---|---|---|---|
| 73 | Astrophysical neutrinos and cosmic rays observed by IceCube. Advances in Space Research, 2018, 62, 2902-2930. | 2.6 | 20 |
| 74 | A Search for IceCube Events in the Direction of ANITA Neutrino Candidates. Astrophysical Journal, 2020, 892, 53. | 4.5 | 20 |
| 75 | A Search for MeV to TeV Neutrinos from Fast Radio Bursts with IceCube. Astrophysical Journal, 2020, 890, 111. | 4.5 | 20 |
| 76 | Follow-up of Astrophysical Transients in Real Time with the IceCube Neutrino Observatory. Astrophysical Journal, 2021, 910, 4. | 4.5 | 18 |
| 77 | Deep-learning based reconstruction of the shower maximum X <sub>max</sub> using the water-Cherenkov detectors of the Pierre Auger Observatory. Journal of Instrumentation, 2021, 16, P07019. | 1.2 | 16 |
| 78 | Measurement of the high-energy all-flavor neutrino-nucleon cross section with IceCube. Physical Review D, 2021, 104, . | 4.7 | 15 |
| 79 | Search for GeV-scale dark matter annihilation in the Sun with IceCube DeepCore. Physical Review D, 2022, 105, . | 4.7 | 15 |
| 80 | A TARGETED SEARCH FOR POINT SOURCES OF EeV NEUTRONS. Astrophysical Journal Letters, 2014, 789, L34. | 8.3 | 14 |
| 81 | Efficient propagation of systematic uncertainties from calibration to analysis with the SnowStorm method in IceCube. Journal of Cosmology and Astroparticle Physics, 2019, 2019, 048-048. | 5.4 | 14 |
| 82 | In-situ calibration of the single-photoelectron charge response of the IceCube photomultiplier tubes. Journal of Instrumentation, 2020, 15, P06032-P06032. | 1.2 | 14 |
| 83 | Search for transient optical counterparts to high-energy IceCube neutrinos with Pan-STARRS1. Astronomy and Astrophysics, 2019, 626, A117. | 5.1 | 13 |
| 84 | All-flavor constraints on nonstandard neutrino interactions and generalized matter potential with three years of IceCube DeepCore data. Physical Review D, 2021, 104, . | 4.7 | 13 |
| 85 | Search for patterns by combining cosmic-ray energy and arrival directions at the Pierre Auger Observatory. European Physical Journal C, 2015, 75, 269. | 3.9 | 12 |
| 86 | Search for PeV Gamma-Ray Emission from the Southern Hemisphere with 5 Yr of Data from the IceCube Observatory. Astrophysical Journal, 2020, 891, 9. | 4.5 | 12 |
| 87 | Development of an analysis to probe the neutrino mass ordering with atmospheric neutrinos using three years of IceCube DeepCore data. European Physical Journal C, 2020, 80, 1. | 3.9 | 12 |
| 88 | Search for Multi-flare Neutrino Emissions in 10 yr of IceCube Data from a Catalog of Sources. Astrophysical Journal Letters, 2021, 920, L45. | 8.3 | 12 |
| 89 | Search for Relativistic Magnetic Monopoles with Eight Years of IceCube Data. Physical Review Letters, 2022, 128, 051101. | 7.8 | 12 |
| 90 | Neutrino oscillation studies with IceCube-DeepCore. Nuclear Physics B, 2016, 908, 161-177. | 2.5 | 11 |

| # | Article | IF | Citations |
|---|---|---|---|
| 91 | Extraction of the muon signals recorded with the surface detector of the Pierre Auger Observatory using recurrent neural networks. Journal of Instrumentation, 2021, 16, P07016. | 1.2 | 11 |
| 92 | A Search for Neutrino Point-source Populations in 7 yr of IceCube Data with Neutrino-count Statistics. Astrophysical Journal, 2020, 893, 102. | 4.5 | 11 |
| 93 | A Search for Time-dependent Astrophysical Neutrino Emission with IceCube Data from 2012 to 2017. Astrophysical Journal, 2021, 911, 67. | 4.5 | 9 |
| 94 | Publisherâ€™s Note: Search for ultrahigh energy neutrinos in highly inclined events at the Pierre Auger Observatory [Phys. Rev. D84, 122005 (2011)]. Physical Review D, 2012, 85, . | 4.7 | 8 |
| 95 | Identifying clouds over the Pierre Auger Observatory using infrared satellite data. Astroparticle Physics, 2013, 50-52, 92-101. | 4.3 | 8 |
| 96 | SEARCH FOR SOURCES OF HIGH-ENERGY NEUTRONS WITH FOUR YEARS OF DATA FROM THE ICETOP DETECTOR. Astrophysical Journal, 2016, 830, 129. | 4.5 | 7 |
| 97 | Detection of the Temporal Variation of the Sun's Cosmic Ray Shadow with the IceCube Detector. Astrophysical Journal, 2019, 872, 133. | 4.5 | 7 |
| 98 | Search for High-energy Neutrinos from Ultraluminous Infrared Galaxies with IceCube. Astrophysical Journal, 2022, 926, 59. | 4.5 | 7 |
| 99 | Strong Constraints on Neutrino Nonstandard Interactions from TeV-Scale <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>Î½</mml:mi><mml:mi>Î¼</mml:mi></mml:msub></mml:math> Disappearance at IceCube. Physical Review Letters, 2022, 129, . | 7.8 | 7 |
| 100 | A search for anisotropy in the arrival directions of ultra high energy cosmic rays recorded at the Pierre Auger Observatory. Journal of Cosmology and Astroparticle Physics, 2012, 2012, 040-040. | 5.4 | 6 |
| 101 | Origin of atmospheric aerosols at the Pierre Auger Observatory using studies of air mass trajectories in South America. Atmospheric Research, 2014, 149, 120-135. | 4.1 | 6 |
| 102 | Velocity independent constraints on spin-dependent DM-nucleon interactions from IceCube and PICO. European Physical Journal C, 2020, 80, 1. | 3.9 | 6 |
| 103 | First all-flavor search for transient neutrino emission using 3-years of IceCube DeepCore data. Journal of Cosmology and Astroparticle Physics, 2022, 2022, 027. | 5.4 | 6 |
| 104 | THE SEARCH FOR TRANSIENT ASTROPHYSICAL NEUTRINO EMISSION WITH ICECUBE-DEEPCORE. Astrophysical Journal, 2016, 816, 75. | 4.5 | 5 |
| 105 | Constraints on neutrino emission from nearby galaxies using the 2MASS redshift survey and IceCube. Journal of Cosmology and Astroparticle Physics, 2020, 2020, 042-042. | 5.4 | 5 |
| 106 | Search for GeV neutrino emission during intense gamma-ray solar flares with the IceCube Neutrino Observatory. Physical Review D, 2021, 103, . | 4.7 | 5 |
| 107 | Improving the directional reconstruction of PeV hadronic cascades in IceCube. EPJ Web of Conferences, 2019, 207, 05003. | 0.3 | 3 |
| 108 | Neutrinos below 100 TeV from the southern sky employing refined veto techniques to IceCube data. Astroparticle Physics, 2020, 116, 102392. | 4.3 | 3 |

| # | Article | IF | Citations |
|---|---|---|---|
| 109 | Design and performance of the first IceAct demonstrator at the South Pole. Journal of Instrumentation, 2020, 15, T02002-T02002. | 1.2 | 3 |
| 110 | Multi-flavour PeV neutrino search with IceCube. , 2017, , . | | 3 |
| 111 | Computational techniques for the analysis of small signals in high-statistics neutrino oscillation experiments. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2020, 977, 164332. | 1.6 | 2 |
| 112 | The use of Cherenkov light in the detection of high-energy cosmic rays and neutrinos: The Pierre Auger and IceCube Observatories. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2020, 970, 163678. | 1.6 | 0 |