Roberto Battiston

List of Publications by Year
in descending order

81 papers	8,308 citations	101543 36 h-index	69250 77 g-index
83 all docs	83 docs citations	83 times ranked	7602 citing authors

#	Article	IF	Citations
1	Deep learning based event reconstruction for the Limadou High-Energy Particle Detector. Physical Review D, 2022, 105, .	4.7	0
2	New results on protons inside the South Atlantic Anomaly, at energies between 40 and 250ÂMeV in the period 2018â€“2020, from the CSES-01 satellite mission. Physical Review D, 2022, 105, .	4.7	7
3	Design of an Antimatter Large Acceptance Detector In Orbit (ALADInO). Instruments, 2022, 6, 19.	1.8	6
4	Are the Significant Ionospheric Anomalies Associated with the 2007 Great Deep-Focus Undersea Jakartaâ€“Java Earthquake?. Remote Sensing, 2022, 14, 2211.	4.0	2
5	On the Magnetosphereâ€Ionosphere Coupling During the May 2021 Geomagnetic Storm. Space Weather, 2022, 20, .	3.7	4
6	The Alpha Magnetic Spectrometer (AMS) on the international space station: Part II â€”ÂResults from the first seven years. Physics Reports, 2021, 894, 1-116.	25.6	160
7	Can an impulsive variation of the solar wind plasma pressure trigger a plasma bubble? A case study based on CSES, Swarm and THEMIS data. Advances in Space Research, 2021, 67, 35-45.	2.6	12
8	Trapped Proton Fluxes Estimation Inside the South Atlantic Anomaly Using the NASA AE9/AP9/SPM Radiation Models along the China Seismo-Electromagnetic Satellite Orbit. Applied Sciences (Switzerland), 2021, 11, 3465.	2.5	4
9	A mathematical model of lithosphereâ€“atmosphere coupling for seismic events. Scientific Reports, 2021, 11, 8682.	3.3	19
10	High precision particle astrophysics as a new window on the universe with an Antimatter Large Acceptance Detector In Orbit (ALADInO). Experimental Astronomy, 2021, 51, 1299-1330.	3.7	9
11	The August 2018 Geomagnetic Storm Observed by the High-Energy Particle Detector on Board the CSES-01 Satellite. Applied Sciences (Switzerland), 2021, 11, 5680.	2.5	13
12	Towards advancing the earthquake forecasting by machine learning of satellite data. Science of the Total Environment, 2021, 771, 145256.	8.0	38
13	On the Geomagnetic Field Line Resonance Eigenfrequency Variations during Seismic Event. Remote Sensing, 2021, 13, 2839.	4.0	2
14	The electronics of the High-Energy Particle Detector on board the CSES-01 satellite. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2021, 1013, 165639.	1.6	9
15	Control and data acquisition software of the highâ€energy particle detector on board the China Seismoâ€Electromagnetic Satellite space mission. Software - Practice and Experience, 2021, 51, 1459-1480.	3.6	10
16	Pre-Earthquake Ionospheric Perturbation Identification Using CSES Data via Transfer Learning. Frontiers in Environmental Science, 2021, 9, .	3.3	11
17	Identification of Electromagnetic Pre-Earthquake Perturbations from the DEMETER Data by Machine Learning. Remote Sensing, 2020, 12, 3643.	4.0	14
18	High precision cosmic ray physics with AMS-02 on the International Space Station. Rivista Del Nuovo Cimento, 2020, 43, 319-384.	5.7	4

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19	Magnetosphericâ€“Ionosphericâ€“Lithospheric Coupling Model. 1: Observations during the 5 August 2018 Bayan Earthquake. Remote Sensing, 2020, 12, 3299.	4.0	37
20	Beam test calibrations of the HEPD detector on board the China Seismo-Electromagnetic Satellite. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2020, 974, 164170.	1.6	15
21	Conceptual design of a high temperature superconducting magnet for a particle physics experiment in space. Superconductor Science and Technology, 2020, 33, 044012.	3.5	12
22	Galactic Cosmic-Ray Hydrogen Spectra in the 40â€“250 MeV Range Measured by the High-energy Particle Detector (HEPD) on board the CSES-01 Satellite between 2018 and 2020. Astrophysical Journal, 2020, 901, 8.	4.5	19
23	Scientific Goals and In-orbit Performance of the High-energy Particle Detector on Board the CSES. Astrophysical Journal, Supplement Series, 2019, 243, 16.	7.7	33
24	Properties of Cosmic Helium Isotopes Measured by the Alpha Magnetic Spectrometer. Physical Review Letters, 2019, 123, 181102.	7.8	40
25	Towards Understanding the Origin of Cosmic-Ray Positrons. Physical Review Letters, 2019, 122, 041102.	7.8	174
26	Towards Understanding the Origin of Cosmic-Ray Electrons. Physical Review Letters, 2019, 122, 101101.	7.8	109
27	Space-Weather capabilities and preliminary results of the High Energy Particle Detector (HEPD) on-board the CSES-01 satellite. , 2019, , .		1
28	The HEPD particle detector of the CSES satellite mission for investigating seismo-associated perturbations of the Van Allen belts. Science China Technological Sciences, 2018, 61, 643-652.	4.0	37
29	Observation of New Properties of Secondary Cosmic Rays Lithium, Beryllium, and Boron by the Alpha Magnetic Spectrometer on the International Space Station. Physical Review Letters, 2018, 120, 021101.	7.8	172
30	Observation of Complex Time Structures in the Cosmic-Ray Electron and Positron Fluxes with the Alpha Magnetic Spectrometer on the International Space Station. Physical Review Letters, 2018, 121, 051102.	7.8	62
31	Observation of Fine Time Structures in the Cosmic Proton and Helium Fluxes with the Alpha Magnetic Spectrometer on the International Space Station. Physical Review Letters, 2018, 121, 051101.	7.8	98
32	Precision Measurement of Cosmic-Ray Nitrogen and its Primary and Secondary Components with the Alpha Magnetic Spectrometer on the International Space Station. Physical Review Letters, 2018, 121, 051103.	7.8	68
33	Observation of the Identical Rigidity Dependence of He, C, and O Cosmic Rays at High Rigidities by the Alpha Magnetic Spectrometer on the International Space Station. Physical Review Letters, 2017, 119, 251101.	7.8	204
34	Seismo-ionospheric anomalies in ionospheric TEC and plasma density before the 17ÂJulyÂ2006 <i>M</i>7.7 south of Java earthquake. Annales Geophysicae, 2017, 35, 589-598.	1.6	22
35	A new method to study the time correlation between Van Allen Belt electrons and earthquakes. International Journal of Remote Sensing, 2016, 37, 5304-5319.	2.9	3
36	What next in fundamental physics in space. Annalen Der Physik, 2016, 528, 55-61.	2.4	0

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37	Antiproton Flux, Antiproton-to-Proton Flux Ratio, and Properties of Elementary Particle Fluxes in Primary Cosmic Rays Measured with the Alpha Magnetic Spectrometer on the International Space Station. Physical Review Letters, 2016, 117, 091103.	7.8	295
38	Precision Measurement of the Boron to Carbon Flux Ratio in Cosmic Rays from 1.9ÂGV to 2.6ÂTV with the Alpha Magnetic Spectrometer on the International Space Station. Physical Review Letters, 2016, 117, 231102.	7.8	236
39	Geospace perturbations induced by the Earth: The state of the art and future trends. Physics and Chemistry of the Earth, 2015, 85-86, 17-33.	2.9	56
40	Precision Measurement of the Helium Flux in Primary Cosmic Rays of Rigidities 1.9ÂGV to 3ÂTV with the Alpha Magnetic Spectrometer on the International Space Station. Physical Review Letters, 2015, 115, 211101.	7.8	369
41	Precision Measurement of the Proton Flux in Primary Cosmic Rays from Rigidity 1ÂGV to 1.8 TV with the Alpha Magnetic Spectrometer on the International Space Station. Physical Review Letters, 2015, 114, 171103.	7.8	655
42	Precision Measurement of the<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mo stretchy="false">(</mml:mo><mml:msup><mml:mi>e</mml:mi><mml:mo>+</mml:mo></mml:msup><mml:mo>+</mml:mo><mml:msu Alpha Magnetic Spectrometer on the International Space Station. Physical Review Letters, 2014, 113, 221102.	7.8	238
43	Cosmic ray physics in space: from fundamental physics to applications. Rendiconti Lincei, 2014, 25, 97-105.	2.2	0
44	A Magnesium Diboride Superconducting Toroid for Astroparticle Shielding. IEEE Transactions on Applied Superconductivity, 2014, 24, 1-4.	1.7	16
45	Electron and Positron Fluxes in Primary Cosmic Rays Measured with the Alpha Magnetic Spectrometer on the International Space Station. Physical Review Letters, 2014, 113, 121102.	7.8	397
46	High Statistics Measurement of the Positron Fraction in Primary Cosmic Rays of 0.5â€“500ÂGeV with the Alpha Magnetic Spectrometer on the International Space Station. Physical Review Letters, 2014, 113, 121101.	7.8	428
47	Precision measurements of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si4.gif" display="inline" overflow="scroll"><mml:msup><mml:mrow><mml:mi>e</mml:mi></mml:mrow><mml:mrow><mml:mo>+</mml:mo></mml:mrow><m width="0.16667em" /><mml:msup><mml:mrow><mml:mi>e</mml:mi></mml:mrow><mml:mrow><mml:mo>â^’</mml:mo></mml:mrow></mml:msup></r Cosmic Ray with the Alpha Magnetic Spectrometer on the ISS. Physics of the Dark Universe, 2014, 4, 6-9.	4.9	10
48	Superconducting Magnets for Astroparticle Shielding in Interplanetary Manned Missions. IEEE Transactions on Applied Superconductivity, 2013, 23, 4101604-4101604.	1.7	18
49	First evidence for correlations between electron fluxes measured by NOAA-POES satellites and large seismic events. Nuclear Physics, Section B, Proceedings Supplements, 2013, 243-244, 249-257.	0.4	20
50	First Result from the Alpha Magnetic Spectrometer on the International Space Station: Precision Measurement of the Positron Fraction in Primary Cosmic Rays of 0.5â€“350 GeV. Physical Review Letters, 2013, 110, 141102.	7.8	852
51	A study of NOAA particle flux sensitivity to solar activity and strategies to search for correlations among satellite data and earthquake phenomena. International Journal of Remote Sensing, 2012, 33, 4796-4814.	2.9	8
52	Upgrade of the Alpha Magnetic Spectrometer (AMS-02) for long term operation on the International Space Station (ISS). Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2011, 654, 639-648.	1.6	95
53	Space Borne Experiments. Landolt-Bâ^šâ^‚rnstein - Group I Elementary Particles, Nuclei and Atoms, 2011, , 115-146.	0.2	1
54	RELATIVE COMPOSITION AND ENERGY SPECTRA OF LIGHT NUCLEI IN COSMIC RAYS: RESULTS FROM AMS-01. Astrophysical Journal, 2010, 724, 329-340.	4.5	50

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55	Aiglon, a magnetic spectrometer for low energy electrons. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2010, 617, 467-470.	1.6	2
56	The internal alignment and position resolution of the AMS-02 silicon tracker determined with cosmic-ray muons. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2010, 613, 207-217.	1.6	73
57	Possible ion-acoustic soliton formation in the ionospheric perturbations observed on DEMETER before the 2007 Puâ€™er earthquake. Earthquake Science, 2009, 22, 257-262.	0.9	4
58	Double volume reflection of a proton beam by a sequence of two bent crystals. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2008, 658, 109-111.	4.1	25
59	The antimatter spectrometer (AMS-02): A particle physics detector in space. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2008, 588, 227-234.	1.6	75
60	The alpha magnetic spectrometer silicon tracker: Performance results with protons and helium nuclei. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2008, 593, 376-398.	1.6	45
61	Novel Silicon Photomultipliers for PET Applications. IEEE Transactions on Nuclear Science, 2008, 55, 877-881.	2.0	25
62	Deflection of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mn>400</mml:mn><mml:mtext>â€‰</mml:mtext><mml:mtext>â€‰</mml:mtext><mml:mi>GeV</mml:mi><r beam with bent silicon crystals at the CERN Super Proton Synchrotron. Physical Review Special Topics: Accelerators and Beams, 2008, 11, .	1.8	50
63	Apparatus to study crystal channeling and volume reflection phenomena at the SPS H8 beamline. Review of Scientific Instruments, 2008, 79, 023303.	1.3	23
64	High-Efficiency Volume Reflection of an Ultrarelativistic Proton Beam with a Bent Silicon Crystal. Physical Review Letters, 2007, 98, 154801.	7.8	123
65	Thermal and electrical characterization of silicon photomultiplier. , 2007, , .		0
66	The Anti Matter Spectrometer (AMS-02): a Particle Physics Detector In Space. Nuclear Physics, Section B, Proceedings Supplements, 2007, 166, 19-29.	0.4	8
67	Cosmic-ray positron fraction measurement from 1 to 30 GeV with AMS-01. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2007, 646, 145-154.	4.1	269
68	Characterization of the First Prototypes of Silicon Photomultiplier Fabricated at ITC-irst. IEEE Transactions on Nuclear Science, 2007, 54, 236-244.	2.0	112
69	Protons with kinetic energy E > 70 MeV trapped in the Earth's radiation belts. Journal of Geophysical Research, 2004, 109, .	3.3	9
70	High-energy protons, electrons, and positrons trapped in Earth's radiation belts. Space Weather, 2004, 2, n/a-n/a.	3.7	20
71	Leptons with energy >200 MeV trapped near the South Atlantic Anomaly. Journal of Geophysical Research, 2003, 108, .	3.3	15
72	The Alpha Magnetic Spectrometer (AMS) on the International Space Station: Part I â€“ results from the test flight on the space shuttle. Physics Reports, 2002, 366, 331-405.	25.6	366

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73	Leptons in near earth orbit. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2000, 484, 10-22.	4.1	224
74	Cosmic protons. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2000, 490, 27-35.	4.1	242
75	Total dose test of commercial off-the-shelf components to be used in power supply for space experiments. IEEE Transactions on Nuclear Science, 2000, 47, 1879-1884.	2.0	10
76	Search for antihelium in cosmic rays. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1999, 461, 387-396.	4.1	114
77	A silicon microstrip tracker in space: Experience with the AMS silicon tracker on STS-91. Il Nuovo Cimento A, 1999, 112, 1325-1343.	0.1	18
78	An antimatter spectrometer in space. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1994, 350, 351-367.	1.6	144
79	The L3 silicon microvertex detector. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1994, 351, 300-312.	1.6	199
80	Evidence for Z0â†'e+eâˆ' at the CERN p collider. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1983, 129, 130-140.	4.1	450
81	Observation of single isolated electrons of high transverse momentum in events with missing transverse energy at the CERN p collider. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1983, 122, 476-485.	4.1	486