Luiz At Machado

List of Publications by Year
in descending order

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106 papers	4,482 citations	117571 34 h-index	118793 62 g-index
151 all docs	151 docs citations	151 times ranked	4752 citing authors

#	Article	IF	Citations
1	Global precipitation measurement: Methods, datasets and applications. Atmospheric Research, 2012, 104-105, 70-97.	1.8	363
2	Substantial convection and precipitation enhancements by ultrafineaerosol particles. Science, 2018, 359, 411-418.	6.0	290
3	Life Cycle Variations of Mesoscale Convective Systems over the Americas. Monthly Weather Review, 1998, 126, 1630-1654.	0.5	265
4	Introduction: Observations and Modeling of the Green Ocean Amazon (GoAmazon2014/5). Atmospheric Chemistry and Physics, 2016, 16, 4785-4797.	1.9	213
5	Structural Characteristics and Radiative Properties of Tropical Cloud Clusters. Monthly Weather Review, 1993, 121, 3234-3260.	0.5	146
6	Forecast and Tracking the Evolution of Cloud Clusters (ForTraCC) Using Satellite Infrared Imagery: Methodology and Validation. Weather and Forecasting, 2008, 23, 233-245.	0.5	144
7	Impact of deforestation in the Amazon basin on cloud climatology. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 3670-3674.	3.3	143
8	The convective boundary layer over pasture and forest in Amazonia. Theoretical and Applied Climatology, 2004, 78, 47.	1.3	137
9	The impact of deforestation on cloud cover over the Amazon arc of deforestation. Remote Sensing of Environment, 2003, 86, 132-140.	4.6	132
10	ACRIDICONâ€“CHUVA Campaign: Studying Tropical Deep Convective Clouds and Precipitation over Amazonia Using the New German Research Aircraft HALO. Bulletin of the American Meteorological Society, 2016, 97, 1885-1908.	1.7	124
11	Amazon boundary layer aerosol concentration sustained by vertical transport during rainfall. Nature, 2016, 539, 416-419.	13.7	112
12	Aerosol characteristics and particle production in the upper troposphere over the Amazon Basin. Atmospheric Chemistry and Physics, 2018, 18, 921-961.	1.9	105
13	The Chuva Project: How Does Convection Vary across Brazil?. Bulletin of the American Meteorological Society, 2014, 95, 1365-1380.	1.7	100
14	Seasonal and diurnal variability of convection over the Amazonia: A comparison of different vegetation types and large scale forcing. Theoretical and Applied Climatology, 2004, 78, 61.	1.3	97
15	Diurnal march of the convection observed during TRMM-WETAMC/LBA. Journal of Geophysical Research, 2002, 107, LBA 31-1.	3.3	80
16	The Convective System Area Expansion over Amazonia and Its Relationships with Convective System Life Duration and High-Level Wind Divergence. Monthly Weather Review, 2004, 132, 714-725.	0.5	70
17	Characteristics of the Amazonian mesoscale convective systems observed from satellite and radar during the WETAMC/LBA experiment. Journal of Geophysical Research, 2002, 107, LBA 21-1.	3.3	65
18	Influence of the Frontal Systems on the Day-to-Day Convection Variability over South America. Journal of Climate, 2004, 17, 1754-1766.	1.2	60

#	Article	IF	Citations
19	Diurnal Variations and Modulation by Easterly Waves of the Size Distribution of Convective Cloud Clusters over West Africa and the Atlantic Ocean. Monthly Weather Review, 1993, 121, 37-49.	0.5	59
20	Further evidence for CCN aerosol concentrations determining the height of warm rain and ice initiation in convective clouds over the Amazon basin. Atmospheric Chemistry and Physics, 2017, 17, 14433-14456.	1.9	58
21	Structural Characteristics of Deep Convective Systems over Tropical Africa and the Atlantic Ocean. Monthly Weather Review, 1992, 120, 392-406.	0.5	53
22	InfluÃªncia da precipitaÃ§Ã£o na qualidade da Ã¡gua do Rio Purus. Acta Amazonica, 2008, 38, 733-742.	0.3	53
23	Observations of sesquiterpenes and their oxidation products in central Amazonia during the wet and dry seasons. Atmospheric Chemistry and Physics, 2018, 18, 10433-10457.	1.9	53
24	Influence of biomass aerosol on precipitation over the Central Amazon: an observational study. Atmospheric Chemistry and Physics, 2015, 15, 6789-6800.	1.9	52
25	Convective cloud vertical velocity and massâ€flux characteristics from radar wind profiler observations during GoAmazon2014/5. Journal of Geophysical Research D: Atmospheres, 2016, 121, 12,891.	1.2	51
26	Downward transport of ozone rich air and implications for atmospheric chemistry in the Amazon rainforest. Atmospheric Environment, 2016, 124, 64-76.	1.9	48
27	Diurnal variation of precipitation in central <scp>A</scp>mazon <scp>B</scp>asin. International Journal of Climatology, 2014, 34, 3574-3584.	1.5	45
28	The Amazon Dense GNSS Meteorological Network: A New Approach for Examining Water Vapor and Deep Convection Interactions in the Tropics. Bulletin of the American Meteorological Society, 2015, 96, 2151-2165.	1.7	44
29	A Storm Safari in Subtropical South America: Proyecto RELAMPAGO. Bulletin of the American Meteorological Society, 2021, 102, E1621-E1644.	1.7	42
30	Influx of African biomass burning aerosol during the Amazonian dry season through layered transatlantic transport of black carbon-rich smoke. Atmospheric Chemistry and Physics, 2020, 20, 4757-4785.	1.9	40
31	Aircraft-based observations of isoprene-epoxydiol-derived secondary organic aerosol (IEPOX-SOA) in the tropical upper troposphere over the Amazon region. Atmospheric Chemistry and Physics, 2018, 18, 14979-15001.	1.9	39
32	Heavy Rainfall Episodes in the Eastern Northeast Brazil Linked to Large-Scale Ocean-Atmosphere Conditions in the Tropical Atlantic. Advances in Meteorology, 2012, 2012, 1-16.	0.6	38
33	Spatial Variability of the Background Diurnal Cycle of Deep Convection around the GoAmazon2014/5 Field Campaign Sites. Journal of Applied Meteorology and Climatology, 2016, 55, 1579-1598.	0.6	38
34	Cloud characteristics, thermodynamic controls and radiative impacts during the Observations and Modeling of the Green Ocean Amazon (GoAmazon2014/5) experiment. Atmospheric Chemistry and Physics, 2017, 17, 14519-14541.	1.9	38
35	Sensitivities of Amazonian clouds to aerosols and updraft speed. Atmospheric Chemistry and Physics, 2017, 17, 10037-10050.	1.9	37
36	A dense GNSS meteorological network for observing deep convection in the Amazon. Atmospheric Science Letters, 2011, 12, 207-212.	0.8	35

#	ARTICLE	IF	CITATIONS
37	Overview: Precipitation characteristics and sensitivities to environmental conditions during GoAmazon2014/5 and ACRIDICON-CHUVA. Atmospheric Chemistry and Physics, 2018, 18, 6461-6482.	1.9	34
38	Structural Characteristics of Convective Systems over South America Related to Cold-Frontal Incursions. Monthly Weather Review, 2005, 133, 1045-1064.	0.5	33
39	Intercomparison of Integrated Water Vapor Estimates from Multisensors in the Amazonian Region. Journal of Atmospheric and Oceanic Technology, 2007, 24, 1880-1894.	0.5	33
40	Cloud-to-ground lightning and Mesoscale Convective Systems. Atmospheric Research, 2011, 99, 377-390.	1.8	32
41	Aircraft observations of the chemical composition and aging of aerosol in the Manaus urban plume during GoAmazon 2014/5. Atmospheric Chemistry and Physics, 2018, 18, 10773-10797.	1.9	32
42	A consistent gauge database for daily rainfall analysis over the Legal Brazilian Amazon. Journal of Hydrology, 2015, 527, 292-304.	2.3	31
43	Global <scp>P</scp>ositioning <scp>S</scp>ystem precipitable water vapour (<scp>GPSâ€PWV</scp>) jumps before intense rain events: <scp>A</scp> potential application to nowcasting. Meteorological Applications, 2019, 26, 49-63.	0.9	31
44	Comparing parameterized versus measured microphysical properties of tropical convective cloud bases during the ACRIDICONâ€“CHUVA campaign. Atmospheric Chemistry and Physics, 2017, 17, 7365-7386.	1.9	30
45	Impacts of the Manaus pollution plume on the microphysical properties of Amazonian warm-phase clouds in the wet season. Atmospheric Chemistry and Physics, 2016, 16, 7029-7041.	1.9	29
46	Cloud and rain liquid water statistics in the CHUVA campaign. Atmospheric Research, 2014, 144, 126-140.	1.8	28
47	Effect of Turbulence Parameterization on Assessment of Cloud Organization. Monthly Weather Review, 2015, 143, 3246-3262.	0.5	27
48	Relationship between cloud-to-ground discharge and penetrative clouds: A multi-channel satellite application. Atmospheric Research, 2009, 93, 304-309.	1.8	26
49	Analysis of Relative Humidity Sensors at the WMO Radiosonde Intercomparison Experiment in Brazil. Journal of Atmospheric and Oceanic Technology, 2005, 22, 664-678.	0.5	25
50	Polarimetric X-band weather radar measurements in the tropics: radome and rain attenuation correction. Atmospheric Measurement Techniques, 2012, 5, 2183-2199.	1.2	24
51	Electrification life cycle of incipient thunderstorms. Journal of Geophysical Research D: Atmospheres, 2017, 122, 4670-4697.	1.2	24
52	Amazonian climate: results and future research. Theoretical and Applied Climatology, 2004, 78, 187.	1.3	22
53	Observations of sesquiterpenes and their oxidation products in central Amazonia during the wet and dry seasons. Atmospheric Chemistry and Physics, 2018, 18, 10433-10457.	1.9	22
54	Comparative study of the 1982â€“1983 and 1997â€“1998 El NiÃ±o events over different types of vegetation in South America. International Journal of Remote Sensing, 2004, 25, 4063-4077.	1.3	21

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55	The Green Ocean: precipitation insights from the GoAmazon2014/5 experiment. Atmospheric Chemistry and Physics, 2018, 18, 9121-9145.	1.9	21
56	Is There a Classical Inertial Sublayer Over the Amazon Forest?. Geophysical Research Letters, 2019, 46, 5614-5622.	1.5	21
57	Effects of Vegetation and Topography on the Boundary Layer Structure above the Amazon Forest. Journals of the Atmospheric Sciences, 2020, 77, 2941-2957.	0.6	21
58	Rapid growth of anthropogenic organic nanoparticles greatly alters cloud life cycle in the Amazon rainforest. Science Advances, 2022, 8, eabj0329.	4.7	19
59	Life Cycle of Deep Convective Systems over the Eastern Tropical Pacific Observed by TRMM and GOES-W. Journal of the Meteorological Society of Japan, 2009, 87A, 381-391.	0.7	18
60	Polarimetric radar characteristics of storms with and without lightning activity. Journal of Geophysical Research D: Atmospheres, 2016, 121, 14,201.	1.2	18
61	African volcanic emissions influencing atmospheric aerosols over the Amazon rain forest. Atmospheric Chemistry and Physics, 2018, 18, 10391-10405.	1.9	16
62	The Amazonian Low-Level Jet and Its Connection to Convective Cloud Propagation and Evolution. Monthly Weather Review, 2020, 148, 4083-4099.	0.5	16
63	Occurrence and growth of sub-50â€‰nm aerosol particles in the Amazonian boundary layer. Atmospheric Chemistry and Physics, 2022, 22, 3469-3492.	1.9	16
64	X-band dual-polarization radar-based hydrometeor classification for Brazilian tropical precipitation systems. Atmospheric Measurement Techniques, 2019, 12, 811-837.	1.2	15
65	Amazonian mesoscale convective systems: Life cycle and propagation characteristics. International Journal of Climatology, 2021, 41, 3968-3981.	1.5	15
66	Vertical distribution of the particle phase in tropical deep convective clouds as derived from cloud-side reflected solar radiation measurements. Atmospheric Chemistry and Physics, 2017, 17, 9049-9066.	1.9	14
67	Drop Size Distribution Broadening Mechanisms in a Bin Microphysics Eulerian Model. Journals of the Atmospheric Sciences, 2020, 77, 3249-3273.	0.6	14
68	Droplet Size Distributions as a function of rainy system type and Cloud Condensation Nuclei concentrations. Atmospheric Research, 2014, 143, 301-312.	1.8	13
69	Comparison of aircraft measurements during GoAmazon2014/5 and ACRIDICON-CHUVA. Atmospheric Measurement Techniques, 2020, 13, 661-684.	1.2	12
70	Shape and radiative properties of convective systems observed from infrared satellite images. International Journal of Remote Sensing, 2004, 25, 4441-4456.	1.3	11
71	Characterization of the microphysics of precipitation over Amazon region using radar and disdrometer data. Atmospheric Research, 2010, 96, 388-394.	1.8	11
72	Comparing airborne and satellite retrievals of cloud optical thickness and particle effective radius using a spectral radiance ratio technique: two case studies for cirrus and deep convective clouds. Atmospheric Chemistry and Physics, 2018, 18, 4439-4462.	1.9	11

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73	Mean kinematic characteristics of synoptic easterly disturbances over the Atlantic. Advances in Atmospheric Sciences, 2010, 27, 483-499.	1.9	10
74	Impact of secondary droplet activation on the contrasting cloud microphysical relationships during the wet and dry seasons in the Amazon. Atmospheric Research, 2019, 230, 104648.	1.8	10
75	Interactions Between the Amazonian Rainforest andÂCumuli Clouds: A Largeâ€Eddy Simulation, Highâ€Resolution ECMWF, and Observational Intercomparison Study. Journal of Advances in Modeling Earth Systems, 2020, 12, e2019MS001828.	1.3	10
76	Tropical Atlantic Hurricanes, Easterly Waves, and West African Mesoscale Convective Systems. Advances in Meteorology, 2010, 2010, 1-13.	0.6	9
77	A case study of a gravity wave induced by Amazon forest orography and low level jet generation. Agricultural and Forest Meteorology, 2021, 307, 108457.	1.9	9
78	Radiometric estimation of water vapor content over Brazil. Advances in Space Research, 2011, 48, 1506-1514.	1.2	8
79	Stroke multiplicity and horizontal scale of negative charge regions in thunderclouds. Geophysical Research Letters, 2016, 43, 5460-5466.	1.5	8
80	Illustration of microphysical processes in Amazonian deep convective clouds in the gamma phase space: introduction and potential applications. Atmospheric Chemistry and Physics, 2017, 17, 14727-14746.	1.9	8
81	An Evaluation of the GOES-16 Rapid Scan for Nowcasting in Southeastern Brazil: Analysis of a Severe Hailstorm Case. Weather and Forecasting, 2019, 34, 1829-1848.	0.5	8
82	The Amazon Energy Budget Using the ABLE-2B and FluAmazon Data. Journals of the Atmospheric Sciences, 2000, 57, 3131-3144.	0.6	8
83	The impact of future urban scenarios on a severe weather case in the metropolitan area of SÃ£o Paulo. Climatic Change, 2019, 156, 471-488.	1.7	7
84	Quantifying the aerosol effect on droplet size distribution at cloud top. Atmospheric Chemistry and Physics, 2019, 19, 7839-7857.	1.9	7
85	How weather events modify aerosol particle size distributions in the Amazon boundary layer. Atmospheric Chemistry and Physics, 2021, 21, 18065-18086.	1.9	7
86	Combining a Cloud-Resolving Model with Satellite for Cloud Process Model Simulation Validation. Journal of Applied Meteorology and Climatology, 2014, 53, 521-533.	0.6	6
87	Potential use of the GLM for nowcasting and data assimilation. Atmospheric Research, 2020, 242, 105019.	1.8	6
88	What drives daily precipitation over the central Amazon? Differences observed between wet and dry seasons. Atmospheric Chemistry and Physics, 2021, 21, 6735-6754.	1.9	6
89	Morning boundary layer conditions for shallow to deep convective cloud evolution during the dry season in the central Amazon. Atmospheric Chemistry and Physics, 2021, 21, 13207-13225.	1.9	6
90	Basis for a Rainfall Estimation Technique Using IRâ€“VIS Cloud Classification and Parameters over the Life Cycle of Mesoscale Convective Systems. Journal of Applied Meteorology and Climatology, 2008, 47, 1500-1517.	0.6	5

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91	Ground-based single-frequency microwave radiometric measurement of water vapour. International Journal of Remote Sensing, 2011, 32, 8629-8639.	1.3	5
92	Dual polarization radar Lagrangian parameters: a statistics-based probabilistic nowcasting model. Natural Hazards, 2017, 89, 705-721.	1.6	5
93	Building the Next Generation of Climate Modelers: Scale-Aware Physics Parameterization and the â€œGrey Zoneâ€• Challenge. Bulletin of the American Meteorological Society, 2018, 99, ES185-ES189.	1.7	5
94	An examination of microwave rainfall retrieval biases and their characteristics over the Amazon. Atmospheric Research, 2018, 213, 323-330.	1.8	5
95	Rainfall sensitivity analyses for the HSB sounder: an Amazon case study. International Journal of Remote Sensing, 2007, 28, 3529-3545.	1.3	4
96	Observed and simulated variability of droplet spectral dispersion in convective clouds over the Amazon. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2021JD035076.	1.2	4
97	Tropical Atlantic Moisture Flux, Convection over Northeastern Brazil, and Pertinence of the PIRATA Network*. Journal of Climate, 2005, 18, 2093-2101.	1.2	3
98	Cloud droplet formation at the base of tropical convective clouds: closure between modeling and measurement results of ACRIDICONâ€“CHUVA. Atmospheric Chemistry and Physics, 2021, 21, 17513-17528.	1.9	3
99	Macrophysical and Microphysical Characteristics of Convective Rain Cells Observed During SOSâ€CHUVA. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2019JD031187.	1.2	2
100	Estimativa do vento para os baixos nÃveis utilizando imagens dos canais visÃvel e infravermelho prÃ³ximo 3.9 Âµm. Revista Brasileira De Meteorologia, 2008, 23, 206-218.	0.2	2
101	Cloud-Resolving Model Applied to Nowcasting: An Evaluation of Radar Data Assimilation and Microphysics Parameterization. Weather and Forecasting, 2020, 35, 2345-2365.	0.5	2
102	Estudo da variabilidade da cobertura de nuvens altas na AmazÃ´nia Central. Acta Amazonica, 2007, 37, 71-79.	0.3	1
103	A Severe Storm Warning System based in Radar and Satellite Data. , 2009, , .		1
104	ANÃŁISE DA CONVECÃ‡ÃƒO RESOLVIDA EXPLICITAMENTE PELO MODELO BRAMS A PARTIR DA COMPARAÃ‡ÃƒO COM RADIÃ‚NCIAS DE SATÃ‰LITES. Revista Brasileira De Meteorologia, 2015, 30, 327-339.	0.2	1
105	Revisiting the hail radar reflectivity-kinetic energy flux relation by combining T-matrix and Discrete Dipole Approximation calculations to size distribution observations. Journals of the Atmospheric Sciences, 2022, , .	0.6	1
106	Cloud reflectivity profile classification using MSG/SEVIRI infrared multichannel and TRMM data. International Journal of Remote Sensing, 2013, 34, 4384-4405.	1.3	0