Luiz At Machado

List of Publications by Year
in descending order

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	Rapid growth of anthropogenic organic nanoparticles greatly alters cloud life cycle in the Amazon rainforest. Science Advances, 2022, 8, eabj0329.	4.7	19
2	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
3	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
4	Amazonian mesoscale convective systems: Life cycle and propagation characteristics. International Journal of Climatology, 2021, 41, 3968-3981.	1.5	15
5	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
6	A Storm Safari in Subtropical South America: Proyecto RELAMPAGO. Bulletin of the American Meteorological Society, 2021, 102, E1621-E1644.	1.7	42
7	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
8	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
9	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
10	How weather events modify aerosol particle size distributions in the Amazon boundary layer. Atmospheric Chemistry and Physics, 2021, 21, 18065-18086.	1.9	7
11	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
12	Potential use of the GLM for nowcasting and data assimilation. Atmospheric Research, 2020, 242, 105019.	1.8	6
13	Macrophysical and Microphysical Characteristics of Convective Rain Cells Observed During SOSâ€CHUVA. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2019JD031187.	1.2	2
14	Comparison of aircraft measurements during GoAmazon2014/5 and ACRIDICON-CHUVA. Atmospheric Measurement Techniques, 2020, 13, 661-684.	1.2	12
15	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
16	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
17	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
18	The Amazonian Low-Level Jet and Its Connection to Convective Cloud Propagation and Evolution. Monthly Weather Review, 2020, 148, 4083-4099.	0.5	16

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19	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
20	Drop Size Distribution Broadening Mechanisms in a Bin Microphysics Eulerian Model. Journals of the Atmospheric Sciences, 2020, 77, 3249-3273.	0.6	14
21	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
22	Quantifying the aerosol effect on droplet size distribution at cloud top. Atmospheric Chemistry and Physics, 2019, 19, 7839-7857.	1.9	7
23	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
24	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
25	X-band dual-polarization radar-based hydrometeor classification for Brazilian tropical precipitation systems. Atmospheric Measurement Techniques, 2019, 12, 811-837.	1.2	15
26	Is There a Classical Inertial Sublayer Over the Amazon Forest?. Geophysical Research Letters, 2019, 46, 5614-5622.	1.5	21
27	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
28	Aerosol characteristics and particle production in the upper troposphere over the Amazon Basin. Atmospheric Chemistry and Physics, 2018, 18, 921-961.	1.9	105
29	Substantial convection and precipitation enhancements by ultrafineaerosol particles. Science, 2018, 359, 411-418.	6.0	290
30	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
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	The Green Ocean: precipitation insights from the GoAmazon2014/5 experiment. Atmospheric Chemistry and Physics, 2018, 18, 9121-9145.	1.9	21
33	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
34	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
35	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
36	An examination of microwave rainfall retrieval biases and their characteristics over the Amazon. Atmospheric Research, 2018, 213, 323-330.	1.8	5

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37	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
38	African volcanic emissions influencing atmospheric aerosols over the Amazon rain forest. Atmospheric Chemistry and Physics, 2018, 18, 10391-10405.	1.9	16
39	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
40	Electrification life cycle of incipient thunderstorms. Journal of Geophysical Research D: Atmospheres, 2017, 122, 4670-4697.	1.2	24
41	Dual polarization radar Lagrangian parameters: a statistics-based probabilistic nowcasting model. Natural Hazards, 2017, 89, 705-721.	1.6	5
42	Sensitivities of Amazonian clouds to aerosols and updraft speed. Atmospheric Chemistry and Physics, 2017, 17, 10037-10050.	1.9	37
43	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
44	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
45	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
46	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
47	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
48	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
49	Stroke multiplicity and horizontal scale of negative charge regions in thunderclouds. Geophysical Research Letters, 2016, 43, 5460-5466.	1.5	8
50	Polarimetric radar characteristics of storms with and without lightning activity. Journal of Geophysical Research D: Atmospheres, 2016, 121, 14,201.	1.2	18
51	Amazon boundary layer aerosol concentration sustained by vertical transport during rainfall. Nature, 2016, 539, 416-419.	13.7	112
52	Introduction: Observations and Modeling of the Green Ocean Amazon (GoAmazon2014/5). Atmospheric Chemistry and Physics, 2016, 16, 4785-4797.	1.9	213
53	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
54	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

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55	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
56	Downward transport of ozone rich air and implications for atmospheric chemistry in the Amazon rainforest. Atmospheric Environment, 2016, 124, 64-76.	1.9	48
57	Influence of biomass aerosol on precipitation over the Central Amazon: an observational study. Atmospheric Chemistry and Physics, 2015, 15, 6789-6800.	1.9	52
58	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
59	Effect of Turbulence Parameterization on Assessment of Cloud Organization. Monthly Weather Review, 2015, 143, 3246-3262.	0.5	27
60	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
61	A consistent gauge database for daily rainfall analysis over the Legal Brazilian Amazon. Journal of Hydrology, 2015, 527, 292-304.	2.3	31
62	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
63	The Chuva Project: How Does Convection Vary across Brazil?. Bulletin of the American Meteorological Society, 2014, 95, 1365-1380.	1.7	100
64	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
65	Droplet Size Distributions as a function of rainy system type and Cloud Condensation Nuclei concentrations. Atmospheric Research, 2014, 143, 301-312.	1.8	13
66	Cloud and rain liquid water statistics in the CHUVA campaign. Atmospheric Research, 2014, 144, 126-140.	1.8	28
67	Cloud reflectivity profile classification using MSG/SEVIRI infrared multichannel and TRMM data. International Journal of Remote Sensing, 2013, 34, 4384-4405.	1.3	0
68	Polarimetric X-band weather radar measurements in the tropics: radome and rain attenuation correction. Atmospheric Measurement Techniques, 2012, 5, 2183-2199.	1.2	24
69	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
70	Global precipitation measurement: Methods, datasets and applications. Atmospheric Research, 2012, 104-105, 70-97.	1.8	363
71	Ground-based single-frequency microwave radiometric measurement of water vapour. International Journal of Remote Sensing, 2011, 32, 8629-8639.	1.3	5
72	Cloud-to-ground lightning and Mesoscale Convective Systems. Atmospheric Research, 2011, 99, 377-390.	1.8	32

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73	Radiometric estimation of water vapor content over Brazil. Advances in Space Research, 2011, 48, 1506-1514.	1.2	8
74	A dense GNSS meteorological network for observing deep convection in the Amazon. Atmospheric Science Letters, 2011, 12, 207-212.	0.8	35
75	Mean kinematic characteristics of synoptic easterly disturbances over the Atlantic. Advances in Atmospheric Sciences, 2010, 27, 483-499.	1.9	10
76	Tropical Atlantic Hurricanes, Easterly Waves, and West African Mesoscale Convective Systems. Advances in Meteorology, 2010, 2010, 1-13.	0.6	9
77	Characterization of the microphysics of precipitation over Amazon region using radar and disdrometer data. Atmospheric Research, 2010, 96, 388-394.	1.8	11
78	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
79	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
80	A Severe Storm Warning System based in Radar and Satellite Data. , 2009, , .		1
81	Relationship between cloud-to-ground discharge and penetrative clouds: A multi-channel satellite application. Atmospheric Research, 2009, 93, 304-309.	1.8	26
82	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
83	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
84	InfluÃªncia da precipitaÃ§Ã£o na qualidade da Ã¡gua do Rio Purus. Acta Amazonica, 2008, 38, 733-742.	0.3	53
85	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
86	Rainfall sensitivity analyses for the HSB sounder: an Amazon case study. International Journal of Remote Sensing, 2007, 28, 3529-3545.	1.3	4
87	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
88	Estudo da variabilidade da cobertura de nuvens altas na AmazÃ´nia Central. Acta Amazonica, 2007, 37, 71-79.	0.3	1
89	Structural Characteristics of Convective Systems over South America Related to Cold-Frontal Incursions. Monthly Weather Review, 2005, 133, 1045-1064.	0.5	33
90	Tropical Atlantic Moisture Flux, Convection over Northeastern Brazil, and Pertinence of the PIRATA Network*. Journal of Climate, 2005, 18, 2093-2101.	1.2	3

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91	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
92	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
93	The convective boundary layer over pasture and forest in Amazonia. Theoretical and Applied Climatology, 2004, 78, 47.	1.3	137
94	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
95	Amazonian climate: results and future research. Theoretical and Applied Climatology, 2004, 78, 187.	1.3	22
96	Shape and radiative properties of convective systems observed from infrared satellite images. International Journal of Remote Sensing, 2004, 25, 4441-4456.	1.3	11
97	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
98	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
99	The impact of deforestation on cloud cover over the Amazon arc of deforestation. Remote Sensing of Environment, 2003, 86, 132-140.	4.6	132
100	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
101	Diurnal march of the convection observed during TRMM-WETAMC/LBA. Journal of Geophysical Research, 2002, 107, LBA 31-1.	3.3	80
102	The Amazon Energy Budget Using the ABLE-2B and FluAmazon Data. Journals of the Atmospheric Sciences, 2000, 57, 3131-3144.	0.6	8
103	Life Cycle Variations of Mesoscale Convective Systems over the Americas. Monthly Weather Review, 1998, 126, 1630-1654.	0.5	265
104	Structural Characteristics and Radiative Properties of Tropical Cloud Clusters. Monthly Weather Review, 1993, 121, 3234-3260.	0.5	146
105	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
106	Structural Characteristics of Deep Convective Systems over Tropical Africa and the Atlantic Ocean. Monthly Weather Review, 1992, 120, 392-406.	0.5	53