Arlindo da Silva

List of Publications by Year
in descending order

100 papers	14,460 citations	76294 40 h-index	32815 100 g-index
122 all docs	122 docs citations	122 times ranked	15028 citing authors

#	Article	IF	Citations
1	The Modern-Era Retrospective Analysis for Research and Applications, Version 2 (MERRA-2). Journal of Climate, 2017, 30, 5419-5454.	1.2	4,520
2	MERRA: NASAâ€™s Modern-Era Retrospective Analysis for Research and Applications. Journal of Climate, 2011, 24, 3624-3648.	1.2	4,118
3	Data Assimilation Using Incremental Analysis Updates. Monthly Weather Review, 1996, 124, 1256-1271.	0.5	643
4	Online simulations of global aerosol distributions in the NASA GEOSâ€4 model and comparisons to satellite and groundâ€based aerosol optical depth. Journal of Geophysical Research, 2010, 115, .	3.3	400
5	Data assimilation in the presence of forecast bias. Quarterly Journal of the Royal Meteorological Society, 1998, 124, 269-295.	1.0	361
6	The architecture of the earth system modeling framework. Computing in Science and Engineering, 2004, 6, 18-28.	1.2	358
7	Decadal and Interannual SST Variability in the Tropical Atlantic Ocean. Journal of Physical Oceanography, 1996, 26, 1165-1175.	0.7	233
8	Quantification of dust-forced heating of the lower troposphere. Nature, 1998, 395, 367-370.	13.7	223
9	Assessing the Effects of Data Selection with the DAO Physical-Space Statistical Analysis System*. Monthly Weather Review, 1998, 126, 2913-2926.	0.5	222
10	Satellite-based estimates of ground-level fine particulate matter during extreme events: A case study of the Moscow fires in 2010. Atmospheric Environment, 2011, 45, 6225-6232.	1.9	143
11	Maximum-Likelihood Estimation of Forecast and Observation Error Covariance Parameters. Part I: Methodology. Monthly Weather Review, 1999, 127, 1822-1834.	0.5	138
12	Six global biomass burning emission datasets: intercomparison and application in one global aerosol model. Atmospheric Chemistry and Physics, 2020, 20, 969-994.	1.9	120
13	A new interpretation of total column BrO during Arctic spring. Geophysical Research Letters, 2010, 37, .	1.5	116
14	Design and Implementation of Components in the Earth System Modeling Framework. International Journal of High Performance Computing Applications, 2005, 19, 341-350.	2.4	111
15	NASA A-Train and Terra observations of the 2010 Russian wildfires. Atmospheric Chemistry and Physics, 2011, 11, 9287-9301.	1.9	104
16	An overview of the ORACLES (ObseRvations of Aerosols above CLouds and their intEractionS) project: aerosolâ€“cloudâ€“radiation interactions in the southeast Atlantic basin. Atmospheric Chemistry and Physics, 2021, 21, 1507-1563.	1.9	97
17	Moisture budget of the bimodal pattern of the summer circulation over South America. Journal of Geophysical Research, 2002, 107, LBA 42-1.	3.3	89
18	The Choice of Variable for Atmospheric Moisture Analysis. Monthly Weather Review, 2003, 131, 155-171.	0.5	88

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19	MODIS aerosol optical depth observations over urban areas in Pakistan: quantity and quality of the data for air quality monitoring. Atmospheric Pollution Research, 2013, 4, 43-52.	1.8	85
20	Development towards a global operational aerosol consensus: basic climatological characteristics of the International Cooperative for Aerosol Prediction Multi-Model Ensemble (ICAP-MME). Atmospheric Chemistry and Physics, 2015, 15, 335-362.	1.9	76
21	Revealing important nocturnal and dayâ€toâ€day variations in fire smoke emissions through a multiplatform inversion. Geophysical Research Letters, 2015, 42, 3609-3618.	1.5	73
22	Assessment of natural and anthropogenic aerosol air pollution in the Middle East using MERRA-2, CAMS data assimilation products, and high-resolution WRF-Chem model simulations. Atmospheric Chemistry and Physics, 2020, 20, 9281-9310.	1.9	71
23	Source attributions of pollution to the Western Arctic during the NASA ARCTAS field campaign. Atmospheric Chemistry and Physics, 2013, 13, 4707-4721.	1.9	67
24	How emissions uncertainty influences the distribution and radiative impacts of smoke from fires in North America. Atmospheric Chemistry and Physics, 2020, 20, 2073-2097.	1.9	67
25	Skin Temperature Analysis and Bias Correction in a Coupled Land-Atmosphere Data Assimilation System. Journal of the Meteorological Society of Japan, 2007, 85A, 205-228.	0.7	67
26	Current state of the global operational aerosol multiâ€model ensemble: An update from the International Cooperative for Aerosol Prediction (ICAP). Quarterly Journal of the Royal Meteorological Society, 2019, 145, 176-209.	1.0	66
27	Assimilation of SSM/I-Derived Surface Rainfall and Total Precipitable Water for Improving the GEOS Analysis for Climate Studies. Monthly Weather Review, 2000, 128, 509-537.	0.5	64
28	Status and future of numerical atmospheric aerosol prediction with a focus on data requirements. Atmospheric Chemistry and Physics, 2018, 18, 10615-10643.	1.9	64
29	Analysis of satellite-derived Arctic tropospheric BrO columns in conjunction with aircraft measurements during ARCTAS and ARCPAC. Atmospheric Chemistry and Physics, 2012, 12, 1255-1285.	1.9	63
30	Development of a grid-independent GEOS-Chem chemical transport model (v9-02) as an atmospheric chemistry module for Earth system models. Geoscientific Model Development, 2015, 8, 595-602.	1.3	62
31	A new global anthropogenic SO₂ emission inventory for the last decade: a mosaic of satellite-derived and bottom-up emissions. Atmospheric Chemistry and Physics, 2018, 18, 16571-16586.	1.9	61
32	Global simulation of tropospheric chemistry at 12.5â€‰km resolution: performance and evaluation of the GEOS-Chem chemical module (v10-1) within the NASA GEOS Earth system model (GEOS-5 ESM). Geoscientific Model Development, 2018, 11, 4603-4620.	1.3	60
33	Improving Global Analysis and Shortâ€“Range Forecast Using Rainfall and Moisture Observations Derived from TRMM and SSM/I Passive Microwave Sensors. Bulletin of the American Meteorological Society, 2001, 82, 659-679.	1.7	58
34	Impact of Interactive Aerosol on the African Easterly Jet in the NASA GEOS-5 Global Forecasting System. Weather and Forecasting, 2011, 26, 504-519.	0.5	52
35	Impact of assimilated and interactive aerosol on tropical cyclogenesis. Geophysical Research Letters, 2014, 41, 3282-3288.	1.5	52
36	AOD distributions and trends of major aerosol species over a selection of the world's most populated cities based on the 1st version of NASA's MERRA Aerosol Reanalysis. Urban Climate, 2017, 20, 168-191.	2.4	51

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37	An adaptive buddy check for observational quality control. Quarterly Journal of the Royal Meteorological Society, 2001, 127, 2451-2471.	1.0	49
38	Chemical Mechanisms and Their Applications in the Goddard Earth Observing System (GEOS) Earth System Model. Journal of Advances in Modeling Earth Systems, 2017, 9, 3019-3044.	1.3	47
39	Maximum-Likelihood Estimation of Forecast and Observation Error Covariance Parameters. Part II: Applications. Monthly Weather Review, 1999, 127, 1835-1849.	0.5	45
40	A case study of excessive subtropical transport in the stratosphere of a data assimilation system. Journal of Geophysical Research, 2004, 109, .	3.3	42
41	The fate of saharan dust across the atlantic and implications for a central american dust barrier. Atmospheric Chemistry and Physics, 2011, 11, 8415-8431.	1.9	42
42	Use of the CALIOP vertical feature mask for evaluating global aerosol models. Atmospheric Measurement Techniques, 2015, 8, 3647-3669.	1.2	41
43	Observationally constrained analysis of sea salt aerosol in the marine atmosphere. Atmospheric Chemistry and Physics, 2019, 19, 10773-10785.	1.9	40
44	Direct and semiâ€direct aerosol effects in the NASA GEOSâ€5 AGCM: aerosolâ€climate interactions due to prognostic versus prescribed aerosols. Journal of Geophysical Research D: Atmospheres, 2013, 118, 149-169.	1.2	39
45	Evaluation of PM surface concentrations simulated by Version 1 of NASA's MERRA Aerosol Reanalysis over Europe. Atmospheric Pollution Research, 2017, 8, 374-382.	1.8	39
46	Direct Insertion of MODIS Radiances in a Global Aerosol Transport Model. Journals of the Atmospheric Sciences, 2007, 64, 808-827.	0.6	37
47	Evaluation and intercomparison of wildfire smoke forecasts from multiple modeling systems for the 2019 Williams Flats fire. Atmospheric Chemistry and Physics, 2021, 21, 14427-14469.	1.9	37
48	Reactive nitrogen, ozone and ozone production in the Arctic troposphere and the impact of stratosphere-troposphere exchange. Atmospheric Chemistry and Physics, 2011, 11, 13181-13199.	1.9	35
49	Modeling the smoky troposphere of the southeast Atlantic: a comparison to ORACLES airborne observations from September of 2016. Atmospheric Chemistry and Physics, 2020, 20, 11491-11526.	1.9	32
50	Longâ€term variability in Saharan dust transport and its link to North Atlantic sea surface temperature. Geophysical Research Letters, 2008, 35, .	1.5	30
51	Toward Improving Shortâ€Term Predictions of Fine Particulate Matter Over the United States Via Assimilation of Satellite Aerosol Optical Depth Retrievals. Journal of Geophysical Research D: Atmospheres, 2019, 124, 2753-2773.	1.2	28
52	Study of SO Pollution in the Middle East Using MERRAâ€2, CAMS Data Assimilation Products, and Highâ€Resolution WRFâ€Chem Simulations. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2019JD031993.	1.2	26
53	Improving Assimilated Global Datasets Using TMI Rainfall and Columnar Moisture Observations. Journal of Climate, 2000, 13, 4180-4195.	1.2	25
54	Air pollution over the Ganges basin and northwest Bay of Bengal in the early postmonsoon season based on NASA MERRAero data. Journal of Geophysical Research D: Atmospheres, 2014, 119, 1555-1570.	1.2	25

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55	Using Hough Harmonics to Validate and Assess Nonlinear shallow-Water Models. Monthly Weather Review, 1986, 114, 2191-2196.	0.5	24
56	Assimilation of Satellite Cloud Data into the GMAO Finite-Volume Data Assimilation System Using a Parameter Estimation Method. Part I: Motivation and Algorithm Description. Journals of the Atmospheric Sciences, 2007, 64, 3880-3895.	0.6	24
57	Link Between Arctic Tropospheric BrO Explosion Observed From Space and Seaâ€Salt Aerosols From Blowing Snow Investigated Using Ozone Monitoring Instrument BrO Data and GEOSâ€5 Data Assimilation System. Journal of Geophysical Research D: Atmospheres, 2018, 123, 6954-6983.	1.2	23
58	On the Establishment of Stationary Waves in the Northern Hemisphere Winter. Journals of the Atmospheric Sciences, 1993, 50, 43-61.	0.6	22
59	Evaluating the impact of orbital sampling on satelliteâ€"climate model comparisons. Journal of Geophysical Research D: Atmospheres, 2013, 118, 355-369.	1.2	22
60	Modeled and observed properties related to the direct aerosol radiative effect of biomass burning aerosol over the southeastern Atlantic. Atmospheric Chemistry and Physics, 2022, 22, 1-46.	1.9	22
61	Assessment of biomass burning smoke influence on environmental conditions for multiyear tornado outbreaks by combining aerosolâ€aware microphysics and fire emission constraints. Journal of Geophysical Research D: Atmospheres, 2016, 121, 10294-10311.	1.2	21
62	The implementation of NEMS GFS Aerosol Component (NGAC) Version 2.0 for global multispecies forecasting at NOAA/NCEP â€" PartÂ1: Model descriptions. Geoscientific Model Development, 2018, 11, 2315-2332.	1.3	20
63	Simulation of the Ozone Monitoring Instrument aerosol index using the NASA Goddard Earth Observing System aerosol reanalysis products. Atmospheric Measurement Techniques, 2017, 10, 4121-4134.	1.2	19
64	Evaluating Observation Influence on Regional Water Budgets in Reanalyses. Journal of Climate, 2015, 28, 3631-3649.	1.2	17
65	Relationship between circum-Arctic atmospheric wave patterns and large-scale wildfires in boreal summer. Environmental Research Letters, 2021, 16, 064009.	2.2	17
66	Exploring the elevated water vapor signal associated with the free tropospheric biomass burning plume over the southeast Atlantic Ocean. Atmospheric Chemistry and Physics, 2021, 21, 9643-9668.	1.9	17
67	Surface dimming by the 2013 Rim Fire simulated by a sectional aerosol model. Journal of Geophysical Research D: Atmospheres, 2016, 121, 7079-7087.	1.2	16
68	Extending the Atmospheric River Concept to Aerosols: Climate and Air Quality Impacts. Geophysical Research Letters, 2021, 48, e2020GL091827.	1.5	16
69	Improved western U.S. background ozone estimates via constraining nonlocal and local source contributions using Aura TES and OMI observations. Journal of Geophysical Research D: Atmospheres, 2015, 120, 3572-3592.	1.2	15
70	Saharan dust as a causal factor of hemispheric asymmetry in aerosols and cloud cover over the tropical Atlantic Ocean. International Journal of Remote Sensing, 2015, 36, 3423-3445.	1.3	15
71	Dust Impacts on the 2012 Hurricane Nadine Track during the NASA HS3 Field Campaign. Journals of the Atmospheric Sciences, 2018, 75, 2473-2489.	0.6	15
72	Influence of Synopticâ€Dynamic Meteorology on the Longâ€Range Transport of Indochina Biomass Burning Aerosols. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2019JD031260.	1.2	15

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73	Developing and diagnosing climate change indicators of regional aerosol optical properties. Scientific Reports, 2017, 7, 18093.	1.6	14
74	The GOddard SnoW Impurity Module (GOSWIM) for the NASA GEOS-5 Earth System Model: Preliminary Comparisons with Observations in Sapporo, Japan. Scientific Online Letters on the Atmosphere, 2014, 10, 50-56.	0.6	13
75	Inferring iron-oxide species content in atmospheric mineral dust from DSCOVR EPIC observations. Atmospheric Chemistry and Physics, 2022, 22, 1395-1423.	1.9	13
76	A Geostationary Instrument Simulator for Aerosol Observing System Simulation Experiments. Atmosphere, 2019, 10, 2.	1.0	12
77	Reassessment of the moisture source over the Sahara Desert based on NASA reanalysis. Journal of Geophysical Research, 1999, 104, 2015-2030.	3.3	11
78	Trends in sulfur dioxide over the Indian subcontinent during 2003â€“2019. Atmospheric Environment, 2022, 284, 119189.	1.9	11
79	Model-Calculated Seasonal Transport Variations through the Florida Straits: A Comparison Using Different Wind-Stress Climatologies. Journal of Physical Oceanography, 1994, 24, 30-45.	0.7	10
80	Effects of data selection and error specification on the assimilation of AIRS data. Quarterly Journal of the Royal Meteorological Society, 2007, 133, 181-196.	1.0	10
81	The Aerosol Characterization from Polarimeter and Lidar (ACEPOL) airborne field campaign. Earth System Science Data, 2020, 12, 2183-2208.	3.7	10
82	Implementing Applications with the Earth System Modeling Framework. Lecture Notes in Computer Science, 2006, , 563-572.	1.0	8
83	The Use of NASA LANCE Imagery and Data for Near Real-Time Applications. , 2015, , 165-182.		8
84	A Mechanism for Excitation of Ultralong Rossby Waves. Journals of the Atmospheric Sciences, 1987, 44, 3625-3639.	0.6	8
85	On the Parcel Method and the Baroclinic Wedge of Instability. Journals of the Atmospheric Sciences, 1998, 55, 788-795.	0.6	7
86	Multi-sensor cloud and aerosol retrieval simulator and remote sensing from model parameters â€“ Part 2: Aerosols. Geoscientific Model Development, 2016, 9, 2377-2389.	1.3	6
87	Response of Aerosol Direct Radiative Effect to the East Asian Summer Monsoon. IEEE Geoscience and Remote Sensing Letters, 2015, 12, 597-600.	1.4	5
88	Aerosol atmospheric rivers: climatology, event characteristics, and detection algorithm sensitivities. Atmospheric Chemistry and Physics, 2022, 22, 8175-8195.	1.9	5
89	Total dust deposition flux during precipitation in Toyama, Japan, in the spring of 2009: A sensitivity analysis with the NASA GEOS-5 Model. Atmospheric Research, 2016, 167, 298-313.	1.8	4
90	Preliminary estimation of horizontal fluxes of cloud liquid water in relation to subtropical moisture budget studies employing ISCCP, SSMI, and GEOS-1/DAS data sets. Journal of Geophysical Research, 2000, 105, 18067-18089.	3.3	3

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91	Tangent linear analysis of the Mosaic land surface model. Journal of Geophysical Research, 2003, 108, .	3.3	3
92	Monte Carlo Bayesian inference on a statistical model of subâ€gridcolumn moisture variability using highâ€resolution cloud observations. Part 1: Method. Quarterly Journal of the Royal Meteorological Society, 2016, 142, 2505-2527.	1.0	3
93	Monte Carlo Bayesian inference on a statistical model of sub-gridcolumn moisture variability using high-resolution cloud observations. Part 2: Sensitivity tests and results. Quarterly Journal of the Royal Meteorological Society, 2016, 142, 2528-2540.	1.0	3
94	To What Extent Biomass Burning Aerosols Impact South America Seasonal Climate Predictions?. Geophysical Research Letters, 2020, 47, e2020GL088096.	1.5	3
95	Parallel Grid Manipulations in Earth Science Calculations. Lecture Notes in Computer Science, 1999, , 666-679.	1.0	3
96	Comments on â€œOrographically Forced Planetary Waves in the Northern Hemisphere Winter: Steady State Model with Wave-Coupled Lower Boundary Formulationâ€• Journals of the Atmospheric Sciences, 1989, 46, 2101-2103.	0.6	2
97	An Unreported Asian Dust (Kosa) Event in Hokkaido, Japan: A Case Study of 7 March 2016. Scientific Online Letters on the Atmosphere, 2017, 13, 96-101.	0.6	2
98	Atmospheric data assimilation on distributed-memory parallel supercomputers. Lecture Notes in Computer Science, 1998, , 115-124.	1.0	1
99	Cross-organization interoperability experiments of weather and climate models with the Earth System Modeling Framework. Concurrency Computation Practice and Experience, 2007, 19, 583-592.	1.4	1
100	Analysis of the MODIS above-cloud aerosol retrieval algorithm using MCARS. Geoscientific Model Development, 2022, 15, 1-14.	1.3	1