Sassan S Saatchi

List of Publications by Year
in descending order

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		57758	30922
104	11,056	44	102
papers	citations	h-index	g-index

106	106	106	11879
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Aboveground biomass density models for NASAâ€™s Global Ecosystem Dynamics Investigation (GEDI) lidar mission. Remote Sensing of Environment, 2022, 270, 112845.	11.0	108
2	Amazonian terrestrial water balance inferred from satellite-observed water vapor isotopes. Nature Communications, 2022, 13, 2686.	12.8	5
3	Making the US national forest inventory spatially contiguous and temporally consistent. Environmental Research Letters, 2022, 17, 065002.	5.2	8
4	Bamboo phenology and life cycle drive seasonal and longâ€term functioning of Amazonian bambooâ€dominated forests. Journal of Ecology, 2021, 109, 860-876.	4.0	11
5	Global maps of twenty-first century forest carbon fluxes. Nature Climate Change, 2021, 11, 234-240.	18.8	425
6	Satellite Observations of the Tropical Terrestrial Carbon Balance and Interactions With the Water Cycle During the 21st Century. Reviews of Geophysics, 2021, 59, e2020RG000711.	23.0	13
7	Leaf surface water, not plant water stress, drives diurnal variation in tropical forest canopy water content. New Phytologist, 2021, 231, 122-136.	7.3	30
8	Mature Andean forests as globally important carbon sinks and future carbon refuges. Nature Communications, 2021, 12, 2138.	12.8	26
9	Mapping tree diversity in the tropical forest region of ChocÃ³-Colombia. Environmental Research Letters, 2021, 16, 054024.	5.2	10
10	The Impacts of Climate and Wildfire on Ecosystem Gross Primary Productivity in Alaska. Journal of Geophysical Research G: Biogeosciences, 2021, 126, e2020JG006078.	3.0	12
11	New Forest Aboveground Biomass Maps of China Integrating Multiple Datasets. Remote Sensing, 2021, 13, 2892.	4.0	10
12	Detecting vulnerability of humid tropical forests to multiple stressors. One Earth, 2021, 4, 988-1003.	6.8	41
13	Changes in global terrestrial live biomass over the 21st century. Science Advances, 2021, 7, eabe9829.	10.3	136
14	Interannual Variations of Vegetation Optical Depth are Due to Both Water Stress and Biomass Changes. Geophysical Research Letters, 2021, 48, e2021GL095267.	4.0	29
15	Amazonian forest degradation must be incorporated into the COP26 agenda. Nature Geoscience, 2021, 14, 634-635.	12.9	32
16	Detecting forest response to droughts with global observations of vegetation water content. Global Change Biology, 2021, 27, 6005-6024.	9.5	73
17	The NASA AfriSAR campaign: Airborne SAR and lidar measurements of tropical forest structure and biomass in support of current and future space missions. Remote Sensing of Environment, 2021, 264, 112533.	11.0	33
18	The Role of the Biomass Mission in Carbon Cycle Science and Politics. , 2021, , .		0

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19	Forest management in southern China generates short term extensive carbon sequestration. Nature Communications, 2020, 11, 129.	12.8	259
20	Old growth Afrotropical forests critical for maintaining forest carbon. Global Ecology and Biogeography, 2020, 29, 1785-1798.	5.8	19
21	Recent Amplified Global Gross Primary Productivity Due to Temperature Increase Is Offset by Reduced Productivity Due to Water Constraints. AGU Advances, 2020, 1, e2020AV000180.	5.4	50
22	Use of local and global maps of forest canopy height and aboveground biomass to enhance local estimates of biomass in miombo woodlands in Tanzania. International Journal of Applied Earth Observation and Geoinformation, 2020, 89, 102109.	2.8	5
23	Interannual Variability of Carbon Uptake of Secondary Forests in the Brazilian Amazon (2004â€2014). Global Biogeochemical Cycles, 2020, 34, e2019GB006396.	4.9	9
24	Evaluation of the Sensitivity of SMOS L-VOD to Forest Above-Ground Biomass at Global Scale. Remote Sensing, 2020, 12, 1450.	4.0	24
25	Below-surface water mediates the response of African forests to reduced rainfall. Environmental Research Letters, 2020, 15, 034063.	5.2	18
26	Tropical forests did not recover from the strong 2015â€“2016 El NiÃ±o event. Science Advances, 2020, 6, eaay4603.	10.3	127
27	Tropical tree sizeâ€“frequency distributions from airborne lidar. Ecological Applications, 2020, 30, e02154.	3.8	20
28	Fire decline in dry tropical ecosystems enhances decadal land carbon sink. Nature Communications, 2020, 11, 1900.	12.8	30
29	Persistent collapse of biomass in Amazonian forest edges following deforestation leads to unaccounted carbon losses. Science Advances, 2020, 6, .	10.3	82
30	Gap models across micro- to mega-scales of time and space: examples of Tansleyâ€™s ecosystem concept. Forest Ecosystems, 2020, 7, .	3.1	12
31	Lagged effects regulate the inter-annual variability of the tropical carbon balance. Biogeosciences, 2020, 17, 6393-6422.	3.3	26
32	Satellite-observed pantropical carbon dynamics. Nature Plants, 2019, 5, 944-951.	9.3	141
33	A Recent Systematic Increase in Vapor Pressure Deficit over Tropical South America. Scientific Reports, 2019, 9, 15331.	3.3	106
34	Diversity, distribution and dynamics of large trees across an old-growth lowland tropical rain forest landscape. PLoS ONE, 2019, 14, e0224896.	2.5	17
35	Human and Climate Effects on the Hamoun Wetlands. Weather, Climate, and Society, 2019, 11, 609-622.	1.1	22
36	Local validation of global biomass maps. International Journal of Applied Earth Observation and Geoinformation, 2019, 83, 101931.	2.8	15

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37	Upscaling Forest Biomass from Field to Satellite Measurements: Sources of Errors and Ways to Reduce Them. Surveys in Geophysics, 2019, 40, 881-911.	4.6	61
38	Ground Data are Essential for Biomass Remote Sensing Missions. Surveys in Geophysics, 2019, 40, 863-880.	4.6	91
39	The European Space Agency BIOMASS mission: Measuring forest above-ground biomass from space. Remote Sensing of Environment, 2019, 227, 44-60.	11.0	172
40	Forest degradation and biomass loss along the ChocÃ³ region of Colombia. Carbon Balance and Management, 2019, 14, 2.	3.2	23
41	Using a Finer Resolution Biomass Map to Assess the Accuracy of a Regional, Map-Based Estimate of Forest Biomass. Surveys in Geophysics, 2019, 40, 1001-1015.	4.6	14
42	21st Century drought-related fires counteract the decline of Amazon deforestation carbon emissions. Nature Communications, 2018, 9, 536.	12.8	485
43	Comparison of Small- and Large-Footprint Lidar Characterization of Tropical Forest Aboveground Structure and Biomass: A Case Study From Central Gabon. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2018, 11, 3512-3526.	4.9	60
44	Modelling forest canopy height by integrating airborne LiDAR samples with satellite Radar and multispectral imagery. International Journal of Applied Earth Observation and Geoinformation, 2018, 66, 159-173.	2.8	61
45	Canopy area of large trees explains aboveground biomass variations across neotropical forest landscapes. Biogeosciences, 2018, 15, 3377-3390.	3.3	32
46	Carbon storage potential in degraded forests of Kalimantan, Indonesia. Environmental Research Letters, 2018, 13, 095001.	5.2	23
47	In Situ Reference Datasets From the TropiSAR and AfriSAR Campaigns in Support of Upcoming Spaceborne Biomass Missions. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2018, 11, 3617-3627.	4.9	49
48	Topography and Three-Dimensional Structure Can Estimate Tree Diversity along a Tropical Elevational Gradient in Costa Rica. Remote Sensing, 2018, 10, 629.	4.0	11
49	Post-drought decline of the Amazon carbon sink. Nature Communications, 2018, 9, 3172.	12.8	95
50	Impact of data model and point density on aboveground forest biomass estimation from airborne LiDAR. Carbon Balance and Management, 2017, 12, 4.	3.2	30
51	Quantifying biomass consumption and carbon release from the California Rim fire by integrating airborne LiDAR and Landsat OLI data. Journal of Geophysical Research G: Biogeosciences, 2017, 122, 340-353.	3.0	43
52	Active microwave observations of diurnal and seasonal variations of canopy water content across the humid African tropical forests. Geophysical Research Letters, 2017, 44, 2290-2299.	4.0	48
53	Coverage of high biomass forests by the ESA BIOMASS mission under defense restrictions. Remote Sensing of Environment, 2017, 196, 154-162.	11.0	75
54	Structure and allometry in tropical forests of ChocÃ³, Colombia. Forest Ecology and Management, 2017, 405, 309-318.	3.2	16

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55	Mechanistic Processes Controlling Persistent Changes of Forest Canopy Structure After 2005 Amazon Drought. Journal of Geophysical Research G: Biogeosciences, 2017, 122, 3378-3390.	3.0	2
56	Spatial Distribution of Carbon Stored in Forests of theÂDemocratic Republic of Congo. Scientific Reports, 2017, 7, 15030.	3.3	44
57	Land-use and land-cover change carbon emissions between 1901 and 2012 constrained by biomass observations. Biogeosciences, 2017, 14, 5053-5067.	3.3	58
58	Extrapolating Forest Canopy Fuel Properties in the California Rim Fire by Combining Airborne LiDAR and Landsat OLI Data. Remote Sensing, 2017, 9, 394.	4.0	34
59	Impacts of Airborne Lidar Pulse Density on Estimating Biomass Stocks and Changes in a Selectively Logged Tropical Forest. Remote Sensing, 2017, 9, 1068.	4.0	45
60	Global correlation and uncertainty accounting. Dependence Modeling, 2016, 4, .	0.5	2
61	Abiotic Controls on Macroscale Variations of Humid Tropical Forest Height. Remote Sensing, 2016, 8, 494.	4.0	11
62	Sensitivity of L-Band SAR Backscatter to Aboveground Biomass of Global Forests. Remote Sensing, 2016, 8, 522.	4.0	106
63	Airborne Lidar Estimation of Aboveground Forest Biomass in the Absence of Field Inventory. Remote Sensing, 2016, 8, 653.	4.0	43
64	Performance of non-parametric algorithms for spatial mapping of tropical forest structure. Carbon Balance and Management, 2016, 11, 18.	3.2	35
65	Aboveground biomass variability across intact and degraded forests in the Brazilian Amazon. Global Biogeochemical Cycles, 2016, 30, 1639-1660.	4.9	109
66	Magnitude, spatial distribution and uncertainty of forest biomass stocks in Mexico. Remote Sensing of Environment, 2016, 183, 265-281.	11.0	83
67	Lidar detection of individual tree size in tropical forests. Remote Sensing of Environment, 2016, 183, 318-333.	11.0	152
68	Chapter 10. Trees have Already been Invented: Carbon in Woodlands. Collabra, 2016, 2, .	1.3	1
69	Disentangling the contribution of multiple land covers to fireâ€mediated carbon emissions in Amazonia during the 2010 drought. Global Biogeochemical Cycles, 2015, 29, 1739-1753.	4.9	63
70	Satellite observation of tropical forest seasonality: spatial patterns of carbon exchange in Amazonia. Environmental Research Letters, 2015, 10, 084005.	5.2	47
71	Annual Carbon Emissions from Deforestation in the Amazon Basin between 2000 and 2010. PLoS ONE, 2015, 10, e0126754.	2.5	46
72	Predicting spatial variations of tree species richness in tropical forests from highâ€resolution remote sensing. Ecological Applications, 2015, 25, 1776-1789.	3.8	33

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73	Sensitivity of global terrestrial carbon cycle dynamics to variability in satelliteâ€observed burned area. Global Biogeochemical Cycles, 2015, 29, 207-222.	4.9	29
74	Seeing the forest beyond the trees. Global Ecology and Biogeography, 2015, 24, 606-610.	5.8	56
75	Observing terrestrial ecosystems and the carbon cycle from space. Global Change Biology, 2015, 21, 1762-1776.	9.5	339
76	Remote Sensing Assessment of Forest Disturbance across Complex Mountainous Terrain: The Pattern and Severity of Impacts of Tropical Cyclone Yasi on Australian Rainforests. Remote Sensing, 2014, 6, 5633-5649.	4.0	21
77	Size and frequency of natural forest disturbances and the Amazon forest carbon balance. Nature Communications, 2014, 5, 3434.	12.8	169
78	A Systems Engineering Approach to Estimating Uncertainty in Aboveâ€Ground Biomass (<scp>AGB</scp>) Derived from Remoteâ€Sensing Data. Systems Engineering, 2014, 17, 361-373.	2.7	10
79	Global covariation of carbon turnover times with climate in terrestrial ecosystems. Nature, 2014, 514, 213-217.	27.8	648
80	Environmental change and the carbon balance of <scp>A</scp>mazonian forests. Biological Reviews, 2014, 89, 913-931.	10.4	208
81	Widespread decline of Congo rainforest greenness in the past decade. Nature, 2014, 509, 86-90.	27.8	351
82	Estimation of forest aboveground biomass in California using canopy height and leaf area index estimated from satellite data. Remote Sensing of Environment, 2014, 151, 44-56.	11.0	103
83	Beyond mean functional traits: Influence of functional trait profiles on forest structure, production, and mortality across the eastern US. Forest Ecology and Management, 2014, 328, 1-9.	3.2	19
84	Uncertainty in the spatial distribution of tropical forest biomass: a comparison of pan-tropical maps. Carbon Balance and Management, 2013, 8, 10.	3.2	162
85	Forest productivity and water stress in Amazonia: observations from GOSAT chlorophyll fluorescence. Proceedings of the Royal Society B: Biological Sciences, 2013, 280, 20130171.	2.6	245
86	Response of African humid tropical forests to recent rainfall anomalies. Philosophical Transactions of the Royal Society B: Biological Sciences, 2013, 368, 20120306.	4.0	75
87	Persistent effects of a severe drought on Amazonian forest canopy. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 565-570.	7.1	334
88	A novel application of satellite radar data: measuring carbon sequestration and detecting degradation in a community forestry project in Mozambique. Plant Ecology and Diversity, 2013, 6, 159-170.	2.4	27
89	Allometric Scaling and Resource Limitations Model of Tree Heights: Part 2. Site Based Testing of the Model. Remote Sensing, 2013, 5, 202-223.	4.0	15
90	Allometric Scaling and Resource Limitations Model of Tree Heights: Part 1. Model Optimization and Testing over Continental USA. Remote Sensing, 2013, 5, 284-306.	4.0	18

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91	Forest biomass and the science of inventory from space. Nature Climate Change, 2012, 2, 826-827.	18.8	18
92	Modeling the spatial and temporal heterogeneity of deforestationâ€driven carbon emissions: the <scp>INPE</scp>â€<scp>EM</scp> framework applied to the Brazilian Amazon. Global Change Biology, 2012, 18, 3346-3366.	9.5	81
93	A sample design for globally consistent biomass estimation using lidar data from the Geoscience Laser Altimeter System (GLAS). Carbon Balance and Management, 2012, 7, 10.	3.2	25
94	Application of Semi-Automated Filter to Improve Waveform Lidar Sub-Canopy Elevation Model. Remote Sensing, 2012, 4, 1494-1518.	4.0	8
95	Baseline Map of Carbon Emissions from Deforestation in Tropical Regions. Science, 2012, 336, 1573-1576.	12.6	575
96	Estimating aboveground biomass in forest and oil palm plantation in Sabah, Malaysian Borneo using ALOS PALSAR data. Forest Ecology and Management, 2011, 262, 1786-1798.	3.2	155
97	Impact of spatial variability of tropical forest structure on radar estimation of aboveground biomass. Remote Sensing of Environment, 2011, 115, 2836-2849.	11.0	191
98	Benchmark map of forest carbon stocks in tropical regions across three continents. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 9899-9904.	7.1	1,659
99	Predicting alpha diversity of African rain forests: models based on climate and satellite-derived data do not perform better than a purely spatial model. Journal of Biogeography, 2011, 38, 1164-1176.	3.0	30
100	Aboveground biomass and leaf area index (LAI) mapping for Niassa Reserve, northern Mozambique. Journal of Geophysical Research, 2008, 113, .	3.3	42
101	Interactions between rainfall, deforestation and fires during recent years in the Brazilian Amazonia. Philosophical Transactions of the Royal Society B: Biological Sciences, 2008, 363, 1779-1785.	4.0	290
102	Regional ecosystem structure and function: ecological insights from remote sensing of tropical forests. Trends in Ecology and Evolution, 2007, 22, 414-423.	8.7	295
103	Estimation of Forest Fuel Load From Radar Remote Sensing. IEEE Transactions on Geoscience and Remote Sensing, 2007, 45, 1726-1740.	6.3	159
104	Spatial patterns and fire response of recent Amazonian droughts. Geophysical Research Letters, 2007, 34, .	4.0	399