

David Medvigy

List of Publications by Year in descending order

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Version: 2024-02-01

57
papers

4,358
citations

147566

31
h-index

143772

57
g-index

61
all docs

61
docs citations

61
times ranked

6585
citing authors

#	ARTICLE	IF	CITATIONS
1	Vegetation demographics in Earth System Models: A review of progress and priorities. <i>Global Change Biology</i> , 2018, 24, 35-54.	4.2	478
2	Mechanistic scaling of ecosystem function and dynamics in space and time: Ecosystem Demography model version 2. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	393
3	Photosynthetic seasonality of global tropical forests constrained by hydroclimate. <i>Nature Geoscience</i> , 2015, 8, 284-289.	5.4	337
4	Diversity in plant hydraulic traits explains seasonal and interannual variations of vegetation dynamics in seasonally dry tropical forests. <i>New Phytologist</i> , 2016, 212, 80-95.	3.5	274
5	A reversal in global terrestrial stilling and its implications for wind energy production. <i>Nature Climate Change</i> , 2019, 9, 979-985.	8.1	246
6	Tree carbon allocation explains forest drought kill and recovery patterns. <i>Ecology Letters</i> , 2018, 21, 1552-1560.	3.0	217
7	Will seasonally dry tropical forests be sensitive or resistant to future changes in rainfall regimes?. <i>Environmental Research Letters</i> , 2017, 12, 023001.	2.2	210
8	Regional dry-season climate changes due to three decades of Amazonian deforestation. <i>Nature Climate Change</i> , 2017, 7, 200-204.	8.1	165
9	The contributions of land-use change, CO2 fertilization, and climate variability to the Eastern US carbon sink. <i>Global Change Biology</i> , 2006, 12, 2370-2390.	4.2	153
10	A catastrophic tropical drought kills hydraulically vulnerable tree species. <i>Global Change Biology</i> , 2020, 26, 3122-3133.	4.2	132
11	Soil Moisture Stress as a Major Driver of Carbon Cycle Uncertainty. <i>Geophysical Research Letters</i> , 2018, 45, 6495-6503.	1.5	119
12	Terrestrial hydrological controls on land surface phenology of African savannas and woodlands. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2014, 119, 1652-1669.	1.3	117
13	Responses of terrestrial ecosystems and carbon budgets to current and future environmental variability. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 8275-8280.	3.3	101
14	Seasonal carbon dynamics and water fluxes in an Amazon rainforest. <i>Global Change Biology</i> , 2012, 18, 1322-1334.	4.2	87
15	Macroscale prediction of autumn leaf coloration throughout the continental United States. <i>Global Ecology and Biogeography</i> , 2014, 23, 1245-1254.	2.7	86
16	Predicting ecosystem dynamics at regional scales: an evaluation of a terrestrial biosphere model for the forests of northeastern North America. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2012, 367, 222-235.	1.8	75
17	Effects of Deforestation on Spatiotemporal Distributions of Precipitation in South America. <i>Journal of Climate</i> , 2011, 24, 2147-2163.	1.2	74
18	Reduced net methane emissions due to microbial methane oxidation in a warmer Arctic. <i>Nature Climate Change</i> , 2020, 10, 317-321.	8.1	70

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19	The biophysics, ecology, and biogeochemistry of functionally diverse, vertically and horizontally heterogeneous ecosystems: the Ecosystem Demography model, version 2.2 – Part 1: Model description. <i>Geoscientific Model Development</i> , 2019, 12, 4309-4346.	1.3	62
20	Predicting changes in temperate forest budburst using continental-scale observations and models. <i>Geophysical Research Letters</i> , 2013, 40, 359-364.	1.5	57
21	Accelerating rates of Arctic carbon cycling revealed by long-term atmospheric CO ₂ measurements. <i>Science Advances</i> , 2018, 4, eaao1167.	4.7	57
22	Simulated Changes in Northwest U.S. Climate in Response to Amazon Deforestation*. <i>Journal of Climate</i> , 2013, 26, 9115-9136.	1.2	53
23	Effects of seasonal variation of photosynthetic capacity on the carbon fluxes of a temperate deciduous forest. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2013, 118, 1703-1714.	1.3	53
24	Allometric scaling laws linking biomass and rooting depth vary across ontogeny and functional groups in tropical dry forest lianas and trees. <i>New Phytologist</i> , 2020, 226, 714-726.	3.5	53
25	Simulated impacts of insect defoliation on forest carbon dynamics. <i>Environmental Research Letters</i> , 2012, 7, 045703.	2.2	48
26	Variations of leaf longevity in tropical moist forests predicted by a trait-driven carbon optimality model. <i>Ecology Letters</i> , 2017, 20, 1097-1106.	3.0	48
27	Relation between rainfall intensity and savanna tree abundance explained by water use strategies. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 12992-12996.	3.3	44
28	Trends in Daily Solar Radiation and Precipitation Coefficients of Variation since 1984. <i>Journal of Climate</i> , 2012, 25, 1330-1339.	1.2	42
29	Observed variation in soil properties can drive large variation in modelled forest functioning and composition during tropical forest secondary succession. <i>New Phytologist</i> , 2019, 223, 1820-1833.	3.5	40
30	Differential declines in Alaskan boreal forest vitality related to climate and competition. <i>Global Change Biology</i> , 2018, 24, 1097-1107.	4.2	37
31	Tree cover shows strong sensitivity to precipitation variability across the global tropics. <i>Global Ecology and Biogeography</i> , 2018, 27, 450-460.	2.7	35
32	Climate, soil organic layer, and nitrogen jointly drive forest development after fire in the North American boreal zone. <i>Journal of Advances in Modeling Earth Systems</i> , 2016, 8, 1180-1209.	1.3	34
33	Tropical carbon sink accelerated by symbiotic dinitrogen fixation. <i>Nature Communications</i> , 2019, 10, 5637.	5.8	33
34	The timing of abscission affects dispersal distance in a wind-dispersed tropical tree. <i>Functional Ecology</i> , 2013, 27, 208-218.	1.7	32
35	Beyond leaf habit: generalities in plant function across 97 tropical dry forest tree species. <i>New Phytologist</i> , 2021, 232, 148-161.	3.5	28
36	Strong control of surface roughness variations on the simulated dry season regional atmospheric response to contemporary deforestation in Rondônia, Brazil. <i>Journal of Geophysical Research D: Atmospheres</i> , 2014, 119, 13,067.	1.2	25

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37	Mass conservation and atmospheric dynamics in the Regional Atmospheric Modeling System (RAMS). <i>Environmental Fluid Mechanics</i> , 2005, 5, 109-134.	0.7	21
38	Modeling interannual variability of the Amazon hydroclimate. <i>Geophysical Research Letters</i> , 2008, 35, .	1.5	21
39	Soil biogeochemistry across Central and South American tropical dry forests. <i>Ecological Monographs</i> , 2021, 91, e01453.	2.4	19
40	The Oceanâ€“Landâ€“Atmosphere Model: Optimization and Evaluation of Simulated Radiative Fluxes and Precipitation. <i>Monthly Weather Review</i> , 2010, 138, 1923-1939.	0.5	18
41	Hydrological responses to defoliation and drought of an upland oak/pine forest. <i>Hydrological Processes</i> , 2014, 28, 6113-6123.	1.1	18
42	A scalable model for methane consumption in arctic mineral soils. <i>Geophysical Research Letters</i> , 2016, 43, 5143-5150.	1.5	18
43	Non-linear response of vegetation to coherent warming over northern high latitudes. <i>Remote Sensing Letters</i> , 2013, 4, 123-130.	0.6	17
44	Simulated Links between Deforestation and Extreme Cold Events in South America. <i>Journal of Climate</i> , 2012, 25, 3851-3866.	1.2	16
45	Climate-driven shifts in continental net primary production implicated as a driver of a recent abrupt increase in the land carbon sink. <i>Biogeosciences</i> , 2016, 13, 1597-1607.	1.3	12
46	Reduced ecosystem resilience quantifies fineâ€“scale heterogeneity in tropical forest mortality responses to drought. <i>Global Change Biology</i> , 2022, 28, 2081-2094.	4.2	12
47	Aboveâ€“ground net primary productivity in regenerating seasonally dry tropical forest: Contributions of rainfall, forest age and soil. <i>Journal of Ecology</i> , 2021, 109, 3903-3915.	1.9	11
48	Seasonal Flooding Causes Intensification of the River Breeze in the Central Amazon. <i>Journal of Geophysical Research D: Atmospheres</i> , 2019, 124, 5178-5197.	1.2	10
49	Modeling forest carbon cycle response to tree mortality: Effects of plant functional type and disturbance intensity. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2015, 120, 2178-2193.	1.3	9
50	Biomass increases attributed to both faster tree growth and altered allometric relationships under longâ€“term carbon dioxide enrichment at a temperate forest. <i>Global Change Biology</i> , 2020, 26, 2519-2533.	4.2	9
51	Intra-annual variation in microclimatic conditions in relation to vegetation type and structure in two tropical dry forests undergoing secondary succession. <i>Forest Ecology and Management</i> , 2022, 511, 120132.	1.4	8
52	Regional Hydroclimatic Variability Due To Contemporary Deforestation in Southern Amazonia and Associated Boundary Layer Characteristics. <i>Journal of Geophysical Research D: Atmospheres</i> , 2018, 123, 3993-4014.	1.2	7
53	Sensitivity of woody carbon stocks to bark investment strategy in Neotropical savannas and forests. <i>Biogeosciences</i> , 2018, 15, 233-243.	1.3	7
54	Dynamically downscaling predictions for deciduous tree leaf emergence in California under current and future climate. <i>International Journal of Biometeorology</i> , 2016, 60, 935-944.	1.3	3

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55	Climate and hydraulic traits interact to set thresholds for liana viability. Nature Communications, 2022, 13, .	5.8	3
56	Increasing Liana Abundance and Associated Reductions in Tree Growth in Secondary Seasonally Dry Tropical Forest. Frontiers in Forests and Global Change, 2022, 5, .	1.0	2
57	A Terrestrial-Aquatic Model Reveals Cross-Scale Interactions Regulate Lateral Dissolved Organic Carbon Transport From Terrestrial Ecosystems. Journal of Geophysical Research G: Biogeosciences, 2022, 127, .	1.3	2