Michael C Dietze

List of Publications by Year
in descending order

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113	10,284	44042	37183
papers	citations	48 h-index	96 g-index

142	142	142	12343
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Adding Tree Rings to North America's National Forest Inventories: An Essential Tool to Guide Drawdown of Atmospheric CO2. BioScience, 2022, 72, 233-246.	2.2	18
2	Liana optical traits increase tropical forest albedo and reduce ecosystem productivity. Global Change Biology, 2022, 28, 227-244.	4.2	10
3	North American tree migration paced by climate in the West, lagging in the East. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	3.3	27
4	Ecological forecasting of tree growth: Regional fusion of treeâ€ring and forest inventory data to quantify drivers and characterize uncertainty. Global Change Biology, 2022, 28, 2442-2460.	4.2	29
5	The Terrestrial Biosphere Model Farm. Journal of Advances in Modeling Earth Systems, 2022, 14, .	1.3	5
6	Alternative stable states of the forest mycobiome are maintained through positive feedbacks. Nature Ecology and Evolution, 2022, 6, 375-382.	3.4	21
7	Using nearâ€term forecasts and uncertainty partitioning to inform prediction of oligotrophic lake cyanobacterial density. Ecological Applications, 2022, 32, e2590.	1.8	6
8	Development of an open-source regional data assimilation system in PEcAn v. 1.7.2: application to carbon cycle reanalysis across the contiguous US using SIPNET. Geoscientific Model Development, 2022, 15, 3233-3252.	1.3	6
9	Globally, tree fecundity exceeds productivity gradients. Ecology Letters, 2022, 25, 1471-1482.	3.0	11
10	Limits to reproduction and seed size-number trade-offs that shape forest dominance and future recovery. Nature Communications, 2022, 13, 2381.	5.8	21
11	Beyond ecosystem modeling: A roadmap to community cyberinfrastructure for ecological dataâ€model integration. Global Change Biology, 2021, 27, 13-26.	4.2	44
12	Unraveling the relative role of light and water competition between lianas and trees in tropical forests: A vegetation model analysis. Journal of Ecology, 2021, 109, 519-540.	1.9	24
13	Continent-wide tree fecundity driven by indirect climate effects. Nature Communications, 2021, 12, 1242.	5.8	46
14	Training macrosystems scientists requires both interpersonal and technical skills. Frontiers in Ecology and the Environment, 2021, 19, 39-46.	1.9	12
15	Addressing data integration challenges to link ecological processes across scales. Frontiers in Ecology and the Environment, 2021, 19, 30-38.	1.9	74
16	Towards robust statistical inference for complex computer models. Ecology Letters, 2021, 24, 1251-1261.	3.0	22
17	Improving the monitoring of deciduous broadleaf phenology using the Geostationary Operational Environmental Satellite (GOES) 16 and 17. Biogeosciences, 2021, 18, 1971-1985.	1.3	15
18	A reporting format for leaf-level gas exchange data and metadata. Ecological Informatics, 2021, 61, 101232.	2.3	22

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19	Soil microbiome predictability increases with spatial and taxonomic scale. Nature Ecology and Evolution, 2021, 5, 747-756.	3.4	23
20	Effects of the COVID-19 pandemic on noise pollution in three protected areas in metropolitan Boston (USA). Biological Conservation, 2021, 256, 109039.	1.9	30
21	Cutting out the middleman: calibrating and validating a dynamic vegetation model (ED2-PROSPECT5) using remotely sensed surface reflectance. Geoscientific Model Development, 2021, 14, 2603-2633.	1.3	16
22	Reanalysis in Earth System Science: Toward Terrestrial Ecosystem Reanalysis. Reviews of Geophysics, 2021, 59, e2020RG000715.	9.0	24
23	Forest responses to lastâ€millennium hydroclimate variability are governed by spatial variations in ecosystem sensitivity. Ecology Letters, 2021, 24, 498-508.	3.0	7
24	Identifying Data Needed to Reduce Parameter Uncertainty in a Coupled Microbial Soil C and N Decomposition Model. Journal of Geophysical Research G: Biogeosciences, 2021, 126, .	1.3	0
25	Bridging the divide between ecological forecasts and environmental decision making. Ecosphere, 2021, 12, .	1.0	14
26	Does the leaf economic spectrum hold within plant functional types? A Bayesian multivariate trait metaâ€analysis. Ecological Applications, 2020, 30, e02064.	1.8	22
27	Carbon budget of the Harvard Forest Longâ€Term Ecological Research site: pattern, process, and response to global change. Ecological Monographs, 2020, 90, e01423.	2.4	67
28	Pervasive shifts in forest dynamics in a changing world. Science, 2020, 368, .	6.0	576
29	Benchmarking and parameter sensitivity of physiological and vegetation dynamics using the Functionally Assembled Terrestrial Ecosystem Simulator (FATES) at Barro Colorado Island, Panama. Biogeosciences, 2020, 17, 3017-3044.	1.3	82
30	The PROFOUND Database for evaluating vegetation models and simulating climate impacts on European forests. Earth System Science Data, 2020, 12, 1295-1320.	3.7	33
31	The influence of canopy radiation parameter uncertainty on model projections of terrestrial carbon and energy cycling. PLoS ONE, 2019, 14, e0216512.	1.1	13
32	The biophysics, ecology, and biogeochemistry of functionally diverse, vertically and horizontally heterogeneous ecosystems: the Ecosystem Demography model, version 2.2 â€“ Part 1: Model description. Geoscientific Model Development, 2019, 12, 4309-4346.	1.3	62
33	The biophysics, ecology, and biogeochemistry of functionally diverse, vertically and horizontally heterogeneous ecosystems: the Ecosystem Demography model, version 2.2 â€“ Part 2: Model evaluation for tropical South America. Geoscientific Model Development, 2019, 12, 4347-4374.	1.3	29
34	Global imprint of mycorrhizal fungi on whole-plant nutrient economics. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 23163-23168.	3.3	169
35	Spatial vs. temporal controls over soil fungal community similarity at continental and global scales. ISME Journal, 2019, 13, 2082-2093.	4.4	41
36	Scaling Contagious Disturbance: A Spatially-Implicit Dynamic Model. Frontiers in Ecology and Evolution, 2019, 7, .	1.1	4

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37	Forecasting a bright future for ecology. Frontiers in Ecology and the Environment, 2019, 17, 3-3.	1.9	23
38	Targeting Extreme Events: Complementing Near-Term Ecological Forecasting With Rapid Experiments and Regional Surveys. Frontiers in Environmental Science, 2019, 7, .	1.5	5
39	A Statistical Model for Estimating Midday NDVI from the Geostationary Operational Environmental Satellite (GOES) 16 and 17. Remote Sensing, 2019, 11, 2507.	1.8	6
40	Declining Radial Growth Response of Coastal Forests to Hurricanes and Nor'easters. Journal of Geophysical Research G: Biogeosciences, 2018, 123, 832-849.	1.3	34
41	Iterative near-term ecological forecasting: Needs, opportunities, and challenges. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 1424-1432.	3.3	400
42	BETYdb: a yield, trait, and ecosystem service database applied to secondâ€generation bioenergy feedstock production. GCB Bioenergy, 2018, 10, 61-71.	2.5	40
43	Vegetation demographics in Earth System Models: A review of progress and priorities. Global Change Biology, 2018, 24, 35-54.	4.2	478
44	Linking big models to big data: efficient ecosystem model calibration through Bayesian model emulation. Biogeosciences, 2018, 15, 5801-5830.	1.3	71
45	Toward a Social-Ecological Theory of Forest Macrosystems for Improved Ecosystem Management. Forests, 2018, 9, 200.	0.9	9
46	What Limits Predictive Certainty of Longâ€Term Carbon Uptake?. Journal of Geophysical Research G: Biogeosciences, 2018, 123, 3570-3588.	1.3	21
47	Guidelines and considerations for designing field experiments simulating precipitation extremes in forest ecosystems. Methods in Ecology and Evolution, 2018, 9, 2310-2325.	2.2	24
48	Continentalâ€scale nitrogen pollution is shifting forest mycorrhizal associations and soil carbon stocks. Global Change Biology, 2018, 24, 4544-4553.	4.2	115
49	When tree rings go global: Challenges and opportunities for retro- and prospective insight. Quaternary Science Reviews, 2018, 197, 1-20.	1.4	131
50	Brown Dog. , 2018, , .		4
51	Probing the limits of predictability: data assimilation of chaotic dynamics in complex food webs. Ecology Letters, 2018, 21, 93-103.	3.0	33
52	Emergent climate and <scp>CO</scp>₂ sensitivities of net primary productivity in ecosystem models do not agree with empirical data in temperate forests of eastern North America. Global Change Biology, 2017, 23, 2755-2767.	4.2	43
53	A roadmap for improving the representation of photosynthesis in Earth system models. New Phytologist, 2017, 213, 22-42.	3.5	365
54	Prediction in ecology: a firstâ€principles framework. Ecological Applications, 2017, 27, 2048-2060.	1.8	112

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55	Climatic history of the northeastern United States during the past 3000 years. Climate of the Past, 2017, 13, 1355-1379.	1.3	29
56	Forest biogeochemistry in response to drought. Global Change Biology, 2016, 22, 2318-2328.	4.2	133
57	Alteration of forest succession and carbon cycling under elevated CO₂. Global Change Biology, 2016, 22, 351-363.	4.2	30
58	An Architecture for Automatic Deployment of Brown Dog Services at Scale into Diverse Computing Infrastructures. , 2016, , .		4
59	Quantifying the influences of spectral resolution on uncertainty in leaf trait estimates through a Bayesian approach to RTM inversion. Remote Sensing of Environment, 2016, 183, 226-238.	4.6	60
60	Benchmarking historical CMIP5 plant functional types across the Upper Midwest and Northeastern United States. Journal of Geophysical Research G: Biogeosciences, 2016, 121, 523-535.	1.3	19
61	Carbon and energy fluxes in cropland ecosystems: a model-data comparison. Biogeochemistry, 2016, 129, 53-76.	1.7	24
62	Novel and Lost Forests in the Upper Midwestern United States, from New Estimates of Settlement-Era Composition, Stem Density, and Biomass. PLoS ONE, 2016, 11, e0151935.	1.1	48
63	Brown Dog: Leveraging everything towards autocuration. , 2015, , .		13
64	Autocuration Cyberinfrastructure for Scientific Discovery and Preservation. , 2015, , .		2
65	Using ecosystem experiments to improve vegetation models. Nature Climate Change, 2015, 5, 528-534.	8.1	249
66	Modelâ€data assimilation of multiple phenological observations to constrain and predict leaf area index. Ecological Applications, 2015, 25, 546-558.	1.8	30
67	Assessing Interactions Among Changing Climate, Management, and Disturbance in Forests: A Macrosystems Approach. BioScience, 2015, 65, 263-274.	2.2	38
68	Arctic tundra fires: natural variability and responses to climate change. Frontiers in Ecology and the Environment, 2015, 13, 369-377.	1.9	135
69	Carbon cycle uncertainty in the Alaskan Arctic. Biogeosciences, 2014, 11, 4271-4288.	1.3	92
70	Where does the carbon go? A modelâ€“data intercomparison of vegetation carbon allocation and turnover processes at two temperate forest freeâ€air CO₂ enrichment sites. New Phytologist, 2014, 203, 883-899.	3.5	263
71	Evaluation of 11 terrestrial carbonâ€“nitrogen cycle models against observations from two temperate <scp>F</scp>reeâ€<scp>A</scp>ir <scp>CO</scp>₂<scp> E</scp>nrichment studies. New Phytologist, 2014, 202, 803-822.	3.5	378
72	Gaps in knowledge and data driving uncertainty in models of photosynthesis. Photosynthesis Research, 2014, 119, 3-14.	1.6	63

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73	Nonstructural Carbon in Woody Plants. Annual Review of Plant Biology, 2014, 65, 667-687.	8.6	533
74	A general ecophysiological framework for modelling the impact of pests and pathogens on forest ecosystems.. Ecology Letters, 2014, 17, 1418-1426.	3.0	91
75	A quantitative assessment of a terrestrial biosphere model's data needs across North American biomes. Journal of Geophysical Research G: Biogeosciences, 2014, 119, 286-300.	1.3	92
76	Characterizing the diurnal patterns of errors in the prediction of evapotranspiration by several landâ€surface models: An NACP analysis. Journal of Geophysical Research G: Biogeosciences, 2014, 119, 1458-1473.	1.3	69
77	Comprehensive ecosystem modelâ€data synthesis using multiple data sets at two temperate forest freeâ€air CO₂ enrichment experiments: Model performance at ambient CO₂ concentration. Journal of Geophysical Research G: Biogeosciences, 2014, 119, 937-964.	1.3	95
78	The role of data assimilation in predictive ecology. Ecosphere, 2014, 5, 1-16.	1.0	65
79	Scale dependence in the effects of leaf ecophysiological traits on photosynthesis: <scp>B</scp>ayesian parameterization of photosynthesis models. New Phytologist, 2013, 200, 1132-1144.	3.5	52
80	A hierarchical Bayesian approach to the classification of C3 and C4 grass pollen based on SPIRAL Î´13C data. Geochimica Et Cosmochimica Acta, 2013, 121, 168-176.	1.6	12
81	Facilitating feedbacks between field measurements and ecosystem models. Ecological Monographs, 2013, 83, 133-154.	2.4	137
82	On improving the communication between models and data. Plant, Cell and Environment, 2013, 36, 1575-1585.	2.8	92
83	Forest water use and water use efficiency at elevated <scp><scp>CO₂</scp></scp>: a modelâ€data intercomparison at two contrasting temperate forest <scp>FACE</scp> sites. Global Change Biology, 2013, 19, 1759-1779.	4.2	314
84	Predicting yields of shortâ€rotation hybrid poplar (Populus spp.) for the United States through modelâ€“data synthesis. Ecological Applications, 2013, 23, 944-958.	1.8	36
85	Evaluating the agreement between measurements and models of net ecosystem exchange at different times and timescales using wavelet coherence: an example using data from the North American Carbon Program Site-Level Interim Synthesis. Biogeosciences, 2013, 10, 6893-6909.	1.3	30
86	Ecophysiological screening of tree species for biomass production: trade-off between production and water use. Ecosphere, 2013, 4, art138.	1.0	16
87	Translating Probability Density Functions: From R to BUGS and Back Again. R Journal, 2013, 5, 207.	0.7	4
88	Sub-daily Statistical Downscaling of Meteorological Variables Using Neural Networks. Procedia Computer Science, 2012, 9, 887-896.	1.2	24
89	Terrestrial biosphere model performance for interâ€annual variability of landâ€atmosphere <scp><scp>CO₂</scp></scp> exchange. Global Change Biology, 2012, 18, 1971-1987.	4.2	232
90	A modelâ€data comparison of gross primary productivity: Results from the North American Carbon Program site synthesis. Journal of Geophysical Research, 2012, 117, .	3.3	274

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91	Harvesting Carbon from Eastern US Forests: Opportunities and Impacts of an Expanding Bioenergy Industry. Forests, 2012, 3, 370-397.	0.9	24
92	Effects of biotic disturbances on forest carbon cycling in the<scp>U</scp>nited<scp>S</scp>tates and<scp>C</scp>anada. Global Change Biology, 2012, 18, 7-34.	4.2	418
93	Terrestrial biosphere models need better representation of vegetation phenology: results from the <scp>N</scp>orth <scp>A</scp>merican <scp>C</scp>arbon <scp>P</scp>rogram <scp>S</scp>ite <scp>S</scp>ynthesis. Global Change Biology, 2012, 18, 566-584.	4.2	583
94	Bioenergy crop models: descriptions, data requirements, and future challenges. GCB Bioenergy, 2012, 4, 620-633.	2.5	79
95	Impact of nitrogen allocation on growth and photosynthesis of Miscanthus (MiscanthusÂÃ—Âgiganteus). GCB Bioenergy, 2012, 4, 688-697.	2.5	61
96	Characterizing the performance of ecosystem models across time scales: A spectral analysis of the North American Carbon Program site-level synthesis. Journal of Geophysical Research, 2011, 116, .	3.3	72
97	Tree mortality in the eastern and central United States: patterns and drivers. Global Change Biology, 2011, 17, 3312-3326.	4.2	151
98	An ecosystem-scale model for the spread of a host-specific forest pathogen in the Greater Yellowstone Ecosystem. , 2011, 21, 1138-1153.		14
99	Highâ€dimensional coexistence based on individual variation: a synthesis of evidence. Ecological Monographs, 2010, 80, 569-608.	2.4	141
100	A modelâ€data intercomparison of CO₂ exchange across North America: Results from the North American Carbon Program site synthesis. Journal of Geophysical Research, 2010, 115, .	3.3	247
101	A quantitative review comparing the yield of switchgrass in monocultures and mixtures in relation to climate and management factors. GCB Bioenergy, 2010, 2, 16-25.	2.5	83
102	Estimating colonization potential of migrant tree species. Global Change Biology, 2009, 15, 1173-1188.	4.2	50
103	A Predictive Framework to Understand Forest Responses to Global Change. Annals of the New York Academy of Sciences, 2009, 1162, 221-236.	1.8	20
104	Capturing diversity and interspecific variability in allometries: A hierarchical approach. Forest Ecology and Management, 2008, 256, 1939-1948.	1.4	71
105	EVALUATING THE SOURCES OF POTENTIAL MIGRANT SPECIES: IMPLICATIONS UNDER CLIMATE CHANGE. Ecological Applications, 2008, 18, 1664-1678.	1.8	48
106	CHANGING THE GAP DYNAMICS PARADIGM: VEGETATIVE REGENERATION CONTROL ON FOREST RESPONSE TO DISTURBANCE. Ecological Monographs, 2008, 78, 331-347.	2.4	160
107	TREE GROWTH INFERENCE AND PREDICTION FROM DIAMETER CENSUSES AND RING WIDTHS. Ecological Applications, 2007, 17, 1942-1953.	1.8	78
108	Resolving the biodiversity paradox. Ecology Letters, 2007, 10, 647-659.	3.0	185

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109	A scalable algorithm for dispersing population. Journal of Intelligent Information Systems, 2007, 29, 39-61.	2.8	10
110	PREDICTING BIODIVERSITY CHANGE: OUTSIDE THE CLIMATE ENVELOPE, BEYOND THE SPECIESâ€“AREA CURVE. Ecology, 2006, 87, 1896-1906.	1.5	160
111	Chapter 19 Concession Agreements as Port Governance Tools. Research in Transportation Economics, 2006, 17, 437-455.	2.2	47
112	A scalable simulator for forest dynamics. , 2004, , .		6
113	COEXISTENCE: HOW TO IDENTIFY TROPHIC TRADE-OFFS. Ecology, 2003, 84, 17-31.	1.5	95