Daniel M Ricciuto

List of Publications by Year
in descending order

108 papers	7,604 citations	66315 42 h-index	56687 83 g-index
139 all docs	139 docs citations	139 times ranked	8629 citing authors

#	Article	IF	Citations
1	The Community Land Model Version 5: Description of New Features, Benchmarking, and Impact of Forcing Uncertainty. Journal of Advances in Modeling Earth Systems, 2019, 11, 4245-4287.	1.3	692
2	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
3	Evaluation of remote sensing based terrestrial productivity from MODIS using regional tower eddy flux network observations. IEEE Transactions on Geoscience and Remote Sensing, 2006, 44, 1908-1925.	2.7	562
4	A multi-site analysis of random error in tower-based measurements of carbon and energy fluxes. Agricultural and Forest Meteorology, 2006, 136, 1-18.	1.9	398
5	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
6	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
7	Global patterns and controls of soil organic carbon dynamics as simulated by multiple terrestrial biosphere models: Current status and future directions. Global Biogeochemical Cycles, 2015, 29, 775-792.	1.9	241
8	The North American Carbon Program Multi-Scale Synthesis and Terrestrial Model Intercomparison Project â€“ Part 1: Overview and experimental design. Geoscientific Model Development, 2013, 6, 2121-2133.	1.3	212
9	The North American Carbon Program Multi-scale Synthesis and Terrestrial Model Intercomparison Project â€“ Part 2: Environmental driver data. Geoscientific Model Development, 2014, 7, 2875-2893.	1.3	207
10	Impact of largeâ€scale climate extremes on biospheric carbon fluxes: An intercomparison based on MsTMIP data. Global Biogeochemical Cycles, 2014, 28, 585-600.	1.9	181
11	The role of phosphorus dynamics in tropical forests â€“ a modeling study using CLM-CNP. Biogeosciences, 2014, 11, 1667-1681.	1.3	179
12	Uncertainty in the response of terrestrial carbon sink to environmental drivers undermines carbon-climate feedback predictions. Scientific Reports, 2017, 7, 4765.	1.6	156
13	Human-induced greening of the northern extratropical land surface. Nature Climate Change, 2016, 6, 959-963.	8.1	145
14	The REFLEX project: Comparing different algorithms and implementations for the inversion of a terrestrial ecosystem model against eddy covariance data. Agricultural and Forest Meteorology, 2009, 149, 1597-1615.	1.9	138
15	Climate control of terrestrial carbon exchange across biomes and continents. Environmental Research Letters, 2010, 5, 034007.	2.2	137
16	Disentangling climatic and anthropogenic controls on global terrestrial evapotranspiration trends. Environmental Research Letters, 2015, 10, 094008.	2.2	119
17	DIMENSIONALITY REDUCTION FOR COMPLEX MODELS VIA BAYESIAN COMPRESSIVE SENSING. , 2014, 4, 63-93.		118
18	Attaining whole-ecosystem warming using air and deep-soil heating methods with an elevated CO₂ atmosphere. Biogeosciences, 2017, 14, 861-883.	1.3	115

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19	Evaluating runoff simulations from the Community Land Model 4.0 using observations from flux towers and a mountainous watershed. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	111
20	Influence of vegetation and seasonal forcing on carbon dioxide fluxes across the Upper Midwest, USA: Implications for regional scaling. Agricultural and Forest Meteorology, 2008, 148, 288-308.	1.9	106
21	Predicting longâ€term carbon sequestration in response to CO₂ enrichment: How and why do current ecosystem models differ?. Global Biogeochemical Cycles, 2015, 29, 476-495.	1.9	99
22	Sensitivity of surface flux simulations to hydrologic parameters based on an uncertainty quantification framework applied to the Community Land Model. Journal of Geophysical Research, 2012, 117, .	3.3	97
23	The Impact of Parametric Uncertainties on Biogeochemistry in the E3SM Land Model. Journal of Advances in Modeling Earth Systems, 2018, 10, 297-319.	1.3	80
24	Reconstruction of false spring occurrences over the southeastern United States, 1901â€“2007: an increasing risk of spring freeze damage?. Environmental Research Letters, 2011, 6, 024015.	2.2	78
25	Evaluation of continental carbon cycle simulations with North American flux tower observations. Ecological Monographs, 2013, 83, 531-556.	2.4	75
26	Big data visual analytics for exploratory earth system simulation analysis. Computers and Geosciences, 2013, 61, 71-82.	2.0	75
27	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
28	Rapid Net Carbon Loss From a Wholeâ€Ecosystem Warmed Peatland. AGU Advances, 2020, 1, e2020AV000163.	2.3	69
29	Representing northern peatland microtopography and hydrology within the Community Land Model. Biogeosciences, 2015, 12, 6463-6477.	1.3	66
30	The DOE E3SM v1.1 Biogeochemistry Configuration: Description and Simulated Ecosystemâ€Climate Responses to Historical Changes in Forcing. Journal of Advances in Modeling Earth Systems, 2020, 12, e2019MS001766.	1.3	65
31	Estimates of net CO2flux by application of equilibrium boundary layer concepts to CO2and water vapor measurements from a tall tower. Journal of Geophysical Research, 2004, 109, .	3.3	64
32	A Bayesian calibration of a simple carbon cycle model: The role of observations in estimating and reducing uncertainty. Global Biogeochemical Cycles, 2008, 22, .	1.9	63
33	Response of Water Use Efficiency to Global Environmental Change Based on Output From Terrestrial Biosphere Models. Global Biogeochemical Cycles, 2017, 31, 1639-1655.	1.9	63
34	An observational constraint on stomatal function in forests: evaluating coupled carbon and water vapor exchange with carbon isotopes in the Community Land Model (CLM4.5). Biogeosciences, 2016, 13, 5183-5204.	1.3	57
35	Moisture availability mediates the relationship between terrestrial gross primary production and solarâ€induced chlorophyll fluorescence: Insights from globalâ€scale variations. Global Change Biology, 2021, 27, 1144-1156.	4.2	57
36	Asymmetric responses of primary productivity to altered precipitation simulated by ecosystem models across three long-term grassland sites. Biogeosciences, 2018, 15, 3421-3437.	1.3	55

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37	Evaluating the Community Land Model (CLM4.5) at a coniferous forest site in northwestern United States using flux and carbon-isotope measurements. Biogeosciences, 2017, 14, 4315-4340.	1.3	54
38	Impact of hydrological variations on modeling of peatland CO₂ fluxes: Results from the North American Carbon Program site synthesis. Journal of Geophysical Research, 2012, 117, .	3.3	50
39	Parameter and prediction uncertainty in an optimized terrestrial carbon cycle model: Effects of constraining variables and data record length. Journal of Geophysical Research, 2011, 116, .	3.3	49
40	Toward â€œoptimalâ€•integration of terrestrial biosphere models. Geophysical Research Letters, 2015, 42, 4418-4428.	1.5	48
41	Moisture sensitivity of ecosystem respiration: Comparison of 14 forest ecosystems in the Upper Great Lakes Region, USA. Agricultural and Forest Meteorology, 2008, 148, 216-230.	1.9	47
42	Dataâ€Constrained Projections of Methane Fluxes in a Northern Minnesota Peatland in Response to Elevated CO₂ and Warming. Journal of Geophysical Research G: Biogeosciences, 2017, 122, 2841-2861.	1.3	47
43	Causes of interannual variability in ecosystemâ€“atmosphere CO2 exchange in a northern Wisconsin forest using a Bayesian model calibration. Agricultural and Forest Meteorology, 2008, 148, 309-327.	1.9	46
44	Transport of Carbon Dioxide in the Presence of Storm Systems over a Northern Wisconsin Forest. Journals of the Atmospheric Sciences, 2004, 61, 607-618.	0.6	45
45	Increased lightâ€use efficiency in northern terrestrial ecosystems indicated by CO₂ and greening observations. Geophysical Research Letters, 2016, 43, 11,339.	1.5	40
46	Global land carbon sink response to temperature and precipitation varies with ENSO phase. Environmental Research Letters, 2017, 12, 064007.	2.2	39
47	Vegetation Functional Properties Determine Uncertainty of Simulated Ecosystem Productivity: A Traceability Analysis in the East Asian Monsoon Region. Global Biogeochemical Cycles, 2019, 33, 668-689.	1.9	38
48	Estimating crop net primary production using national inventory data and MODIS-derived parameters. ISPRS Journal of Photogrammetry and Remote Sensing, 2013, 80, 61-71.	4.9	35
49	Temporal and Spatial Variation in Peatland Carbon Cycling and Implications for Interpreting Responses of an Ecosystemâ€Scale Warming Experiment. Soil Science Society of America Journal, 2017, 81, 1668-1688.	1.2	34
50	Seasonal changes in GPP/SIF ratios and their climatic determinants across the Northern Hemisphere. Global Change Biology, 2021, 27, 5186-5197.	4.2	34
51	Decomposing CO2fluxes measured over a mixed ecosystem at a tall tower and extending to a region: A case study. Journal of Geophysical Research, 2006, 111, n/a-n/a.	3.3	32
52	Phosphorus feedbacks constraining tropical ecosystem responses to changes in atmospheric CO₂ and climate. Geophysical Research Letters, 2016, 43, 7205-7214.	1.5	32
53	Identification of key parameters controlling demographically structured vegetation dynamics in a land surface model: CLM4.5(FATES). Geoscientific Model Development, 2019, 12, 4133-4164.	1.3	32
54	Decadal trends in the seasonal-cycle amplitude of terrestrial CO₂ exchange resulting from the ensemble of terrestrial biosphere models. Tellus, Series B: Chemical and Physical Meteorology, 2022, 68, 28968.	0.8	31

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55	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
56	Testing a land model in ecosystem functional space via a comparison of observed and modeled ecosystem flux responses to precipitation regimes and associated stresses in a Central U.S. forest. Journal of Geophysical Research G: Biogeosciences, 2016, 121, 1884-1902.	1.3	29
57	The Effects of Phosphorus Cycle Dynamics on Carbon Sources and Sinks in the Amazon Region: A Modeling Study Using ELM v1. Journal of Geophysical Research G: Biogeosciences, 2019, 124, 3686-3698.	1.3	29
58	Bayesian calibration of terrestrial ecosystem models: a study of advanced Markov chain Monte Carlo methods. Biogeosciences, 2017, 14, 4295-4314.	1.3	27
59	Efficient surrogate modeling methods for large-scale Earth system models based on machine-learning techniques. Geoscientific Model Development, 2019, 12, 1791-1807.	1.3	27
60	Evaluation of the Community Land Model simulated carbon and water fluxes against observations over ChinaFLUX sites. Agricultural and Forest Meteorology, 2016, 226-227, 174-185.	1.9	26
61	Cryptic phenology in plants: Case studies, implications, and recommendations. Global Change Biology, 2019, 25, 3591-3608.	4.2	26
62	Global sensitivity analysis, probabilistic calibration, and predictive assessment for the data assimilation linked ecosystem carbon model. Geoscientific Model Development, 2015, 8, 1899-1918.	1.3	25
63	Calibration of the E3SM Land Model Using Surrogateâ€Based Global Optimization. Journal of Advances in Modeling Earth Systems, 2018, 10, 1337-1356.	1.3	25
64	Carbon and energy fluxes in cropland ecosystems: a model-data comparison. Biogeochemistry, 2016, 129, 53-76.	1.7	24
65	Climate extremes and grassland potential productivity. Environmental Research Letters, 2012, 7, 035703.	2.2	23
66	Forecasting Responses of a Northern Peatland Carbon Cycle to Elevated CO₂ and a Gradient of Experimental Warming. Journal of Geophysical Research G: Biogeosciences, 2018, 123, 1057-1071.	1.3	23
67	Mechanistic Modeling of Microtopographic Impacts on CO₂ and CH₄ Fluxes in an Alaskan Tundra Ecosystem Using the CLMâ€Microbe Model. Journal of Advances in Modeling Earth Systems, 2019, 11, 4288-4304.	1.3	22
68	Multiâ€hypothesis comparison of Farquhar and Collatz photosynthesis models reveals the unexpected influence of empirical assumptions at leaf and global scales. Global Change Biology, 2021, 27, 804-822.	4.2	22
69	A nonparametric method for separating photosynthesis and respiration components in CO2flux measurements. Geophysical Research Letters, 2004, 31, n/a-n/a.	1.5	21
70	Evaluating the Community Land Model in a pine stand with shading manipulations and ¹³CO₂ labeling. Biogeosciences, 2016, 13, 641-657.	1.3	18
71	Practical Application of Parallel Coordinates for Climate Model Analysis. Procedia Computer Science, 2012, 9, 877-886.	1.2	17
72	Realized ecological forecast through an interactive Ecological Platform for Assimilating Data (EcoPAD, v1.0) into models. Geoscientific Model Development, 2019, 12, 1119-1137.	1.3	17

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73	Extending a land-surface model with <i>Sphagnum</i> moss to simulate responses of a northern temperate bog to whole ecosystem warming and elevated CO₂. Biogeosciences, 2021, 18, 467-486.	1.3	17
74	Photosynthesis phenology, as defined by solar-induced chlorophyll fluorescence, is overestimated by vegetation indices in the extratropical Northern Hemisphere. Agricultural and Forest Meteorology, 2022, 323, 109027.	1.9	17
75	Surface layer CO2 budget and advective contributions to measurements of net ecosystemâ€“atmosphere exchange of CO2. Agricultural and Forest Meteorology, 2005, 135, 202-214.	1.9	16
76	Soil thermal dynamics, snow cover, and frozen depth under five temperature treatments in an ombrotrophic bog: Constrained forecast with data assimilation. Journal of Geophysical Research G: Biogeosciences, 2017, 122, 2046-2063.	1.3	16
77	An Integrative Model for Soil Biogeochemistry and Methane Processes. II: Warming and Elevated CO₂ Effects on Peatland CH₄ Emissions. Journal of Geophysical Research G: Biogeosciences, 2021, 126, e2020JG005963.	1.3	16
78	Streamflow in the Columbia River Basin: Quantifying Changes Over the Period 1951â€2008 and Determining the Drivers of Those Changes. Water Resources Research, 2019, 55, 6640-6652.	1.7	15
79	Global vegetation biomass production efficiency constrained by models and observations. Global Change Biology, 2020, 26, 1474-1484.	4.2	15
80	Nitrogen and phosphorus cycling in an ombrotrophic peatland: a benchmark for assessing change. Plant and Soil, 2021, 466, 649-674.	1.8	15
81	Spatiotemporal dynamics of ecosystem fires and biomass burning-induced carbon emissions in China over the past two decades. Geography and Sustainability, 2020, 1, 47-58.	1.9	14
82	Estimating daytime CO2fluxes over a mixed forest from tall tower mixing ratio measurements. Journal of Geophysical Research, 2007, 112, .	3.3	13
83	An Approximate Footprint Model for Flux Measurements in the Convective Boundary Layer. Journal of Atmospheric and Oceanic Technology, 2006, 23, 1384-1394.	0.5	12
84	A note on the top-down and bottom-up gradient functions over a forested site. Boundary-Layer Meteorology, 2007, 124, 305-314.	1.2	12
85	An Integrative Model for Soil Biogeochemistry and Methane Processes: I. Model Structure and Sensitivity Analysis. Journal of Geophysical Research G: Biogeosciences, 2021, 126, e2019JG005468.	1.3	11
86	Informing climate models with rapid chamber measurements of forest carbon uptake. Global Change Biology, 2017, 23, 2130-2139.	4.2	9
87	Simulated projections of boreal forest peatland ecosystem productivity are sensitive to observed seasonality in leaf physiologyâ€. Tree Physiology, 2019, 39, 556-572.	1.4	8
88	Assessing terrestrial biogeochemical feedbacks in a strategically geoengineered climate. Environmental Research Letters, 2020, 15, 104043.	2.2	8
89	Uncertainty Quantification of Extratropical Forest Biomass in CMIP5 Models over the Northern Hemisphere. Scientific Reports, 2018, 8, 10962.	1.6	7
90	Evaluating the E3SM land model version 0 (ELMv0) at a temperate forest site using flux and soil water measurements. Geoscientific Model Development, 2019, 12, 1601-1612.	1.3	7

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91	Considering coasts: Adapting terrestrial models to characterize coastal wetland ecosystems. Ecological Modelling, 2021, 450, 109561.	1.2	7
92	Evaluation and modification of ELM seasonal deciduous phenology against observations in a southern boreal peatland forest. Agricultural and Forest Meteorology, 2021, 308-309, 108556.	1.9	7
93	ParCAT: Parallel Climate Analysis Toolkit. Procedia Computer Science, 2013, 18, 2367-2375.	1.2	6
94	Development of mpi_EPIC model for global agroecosystem modeling. Computers and Electronics in Agriculture, 2015, 111, 48-54.	3.7	6
95	Increasing Functional Diversity in a Global Land Surface Model Illustrates Uncertainties Related to Parameter Simplification. Journal of Geophysical Research G: Biogeosciences, 2022, 127, .	1.3	6
96	Stochastic Parameterization to Represent Variability and Extremes in Climate Modeling. Procedia Computer Science, 2014, 29, 1146-1155.	1.2	5
97	A model-independent data assimilation (MIDA) module and its applications in ecology. Geoscientific Model Development, 2021, 14, 5217-5238.	1.3	5
98	Evaluating alternative ebullition models for predicting peatland methane emission and its pathways via dataâ€“model fusion. Biogeosciences, 2022, 19, 2245-2262.	1.3	5
99	Hydrological feedbacks on peatland CH4 emission under warming and elevated CO2: A modeling study. Journal of Hydrology, 2021, 603, 127137.	2.3	4
100	An Efficient Bayesian Method for Advancing the Application of Deep Learning in Earth Science. , 2019, , .		3
101	Updated respiration routines alter spatio-temporal patterns of carbon cycling in a global land surface model. Environmental Research Letters, 2021, 16, 104015.	2.2	3
102	Guidelines for Publicly Archiving Terrestrial Model Data to Enhance Usability, Intercomparison, and Synthesis. Data Science Journal, 2022, 21, 3.	0.6	3
103	Coupling of Tree Growth and Photosynthetic Carbon Uptake Across Six North American Forests. Journal of Geophysical Research G: Biogeosciences, 2022, 127, .	1.3	3
104	Learning-Based Inversion-Free Model-Data Integration to Advance Ecosystem Model Prediction. , 2019, , .		2
105	Seeing the Canopy for the Branches: Improved Within Canopy Scaling of Leaf Nitrogen. Journal of Advances in Modeling Earth Systems, 2020, 12, e2020MS002237.	1.3	2
106	Efficient Distance-based Global Sensitivity Analysis for Terrestrial Ecosystem Modeling. , 2020, , .		1
107	Incorporating Microtopography in a Land Surface Model and Quantifying the Effect on the Carbon Cycle. Journal of Advances in Modeling Earth Systems, 2022, 14, e2021MS002721.	1.3	1
108	Upscaling Methane Flux From Plot Level to Eddy Covariance Tower Domains in Five Alaskan Tundra Ecosystems. Frontiers in Environmental Science, 0, 10, .	1.5	0