Matteo Detto

List of Publications by Year in descending order

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70 papers	4,292 citations	94269 37 h-index	114278 63 g-index
73 all docs	73 docs citations	73 times ranked	7017 citing authors

#	Article	IF	Citations
1	<scp>CTFS</scp>â€Forest<scp>GEO</scp>: a worldwide network monitoring forests in an era of global change. Global Change Biology, 2015, 21, 528-549.	4.2	473
2	Consequences of defaunation for a tropical tree community. Ecology Letters, 2013, 16, 687-694.	3.0	244
3	Evaluating uncertainty in mapping forest carbon with airborne LiDAR. Remote Sensing of Environment, 2011, 115, 3770-3774.	4.6	194
4	Greenhouse gas (CO2, CH4, H2O) fluxes from drained and flooded agricultural peatlands in the Sacramento-San Joaquin Delta. Agriculture, Ecosystems and Environment, 2012, 150, 1-18.	2.5	168
5	Temporal Dynamics in Soil Oxygen and Greenhouse Gases in Two Humid Tropical Forests. Ecosystems, 2011, 14, 171-182.	1.6	146
6	Multiscale analysis of temporal variability of soil CO₂ production as influenced by weather and vegetation. Global Change Biology, 2010, 16, 1589-1605.	4.2	139
7	MODIS-derived global land products of shortwave radiation and diffuse and total photosynthetically active radiation at 5 km resolution from 2000. Remote Sensing of Environment, 2018, 204, 812-825.	4.6	131
8	Comparing laser-based open- and closed-path gas analyzers to measure methane fluxes using the eddy covariance method. Agricultural and Forest Meteorology, 2011, 151, 1312-1324.	1.9	127
9	ForestGEO: Understanding forest diversity and dynamics through a global observatory network. Biological Conservation, 2021, 253, 108907.	1.9	122
10	On the temporal upscaling of evapotranspiration from instantaneous remote sensing measurements to 8-day mean daily-sums. Agricultural and Forest Meteorology, 2012, 152, 212-222.	1.9	121
11	Large Greenhouse Gas Emissions from a Temperate Peatland Pasture. Ecosystems, 2011, 14, 311-325.	1.6	114
12	The challenges of measuring methane fluxes and concentrations over a peatland pasture. Agricultural and Forest Meteorology, 2012, 153, 177-187.	1.9	113
13	Understanding strategies for seed dispersal by wind under contrasting atmospheric conditions. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 19084-19089.	3.3	99
14	Tropospheric ozone reduces carbon assimilation in trees: estimates from analysis of continuous flux measurements. Global Change Biology, 2013, 19, 2427-2443.	4.2	95
15	Bias in the detection of negative density dependence in plant communities. Ecology Letters, 2019, 22, 1923-1939.	3.0	84
16	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
17	Resource acquisition and reproductive strategies of tropical forest in response to the El NiÃ±oâ€“Southern Oscillation. Nature Communications, 2018, 9, 913.	5.8	80
18	Sensitivity of Soil Respiration to Variability in Soil Moisture and Temperature in a Humid Tropical Forest. PLoS ONE, 2013, 8, e80965.	1.1	80

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19	FLUXNET-CH₄: a global, multi-ecosystem dataset and analysis of methane seasonality from freshwater wetlands. Earth System Science Data, 2021, 13, 3607-3689.	3.7	79
20	Causality and Persistence in Ecological Systems: A Nonparametric Spectral Granger Causality Approach. American Naturalist, 2012, 179, 524-535.	1.0	78
21	Tropical forest temperature thresholds for gross primary productivity. Ecosphere, 2018, 9, e02311.	1.0	69
22	Spatial variability in tropical forest leaf area density from multireturn lidar and modeling. Journal of Geophysical Research G: Biogeosciences, 2015, 120, 294-309.	1.3	61
23	Hydrological Networks and Associated Topographic Variation as Templates for the Spatial Organization of Tropical Forest Vegetation. PLoS ONE, 2013, 8, e76296.	1.1	61
24	Regional atmospheric cooling and wetting effect of permafrost thawâ€induced boreal forest loss. Global Change Biology, 2016, 22, 4048-4066.	4.2	60
25	The response of stomatal conductance to seasonal drought in tropical forests. Global Change Biology, 2020, 26, 823-839.	4.2	60
26	Multi-scale integration of satellite remote sensing improves characterization of dry-season green-up in an Amazon tropical evergreen forest. Remote Sensing of Environment, 2020, 246, 111865.	4.6	56
27	Climate and plant trait strategies determine tree carbon allocation to leaves and mediate future forest productivity. Global Change Biology, 2019, 25, 3395-3405.	4.2	53
28	Scaling Properties of Biologically Active Scalar Concentration Fluctuations in the Atmospheric Surface Layer over a Managed Peatland. Boundary-Layer Meteorology, 2010, 136, 407-430.	1.2	51
29	Hydraulicallyâ€vulnerable trees survive on deepâ€water access during droughts in a tropical forest. New Phytologist, 2021, 231, 1798-1813.	3.5	51
30	The impact of expanding flooded land area on the annual evaporation of rice. Agricultural and Forest Meteorology, 2016, 223, 181-193.	1.9	48
31	Variation of energy and carbon fluxes from a restored temperate freshwater wetland and implications for carbon market verification protocols. Journal of Geophysical Research G: Biogeosciences, 2016, 121, 777-795.	1.3	47
32	Spatiotemporal variability of soil respiration in a seasonal tropical forest. Ecology and Evolution, 2017, 7, 7104-7116.	0.8	47
33	Imaging canopy temperature: shedding (thermal) light on ecosystem processes. New Phytologist, 2021, 230, 1746-1753.	3.5	47
34	Lightning is a major cause of large tree mortality in a lowland neotropical forest. New Phytologist, 2020, 225, 1936-1944.	3.5	46
35	Ecoâ€hydrological controls on summertime convective rainfall triggers. Global Change Biology, 2007, 13, 887-896.	4.2	44
36	Predicting shifts in the functional composition of tropical forests under increased drought and <scp>CO</scp>₂ from tradeâ€offs among plant hydraulic traits. Ecology Letters, 2019, 22, 67-77.	3.0	43

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37	Fitting Ecological Process Models to Spatial Patterns Using Scalewise Variances and Moment Equations. American Naturalist, 2013, 181, E68-E82.	1.0	40
38	Scale-dependent soil macronutrient heterogeneity reveals effects of litterfall in a tropical rainforest. Plant and Soil, 2015, 391, 51-61.	1.8	38
39	Importance of topography for tree species habitat distributions in a terra firme forest in the Colombian Amazon. Plant and Soil, 2020, 450, 133-149.	1.8	35
40	Causes and consequences of pronounced variation in the isotope composition of plant xylem water. Biogeosciences, 2020, 17, 4853-4870.	1.3	33
41	Homoeostatic maintenance of nonstructural carbohydrates during the 2015â€“2016 El NiÃ±o drought across a tropical forest precipitation gradient. Plant, Cell and Environment, 2019, 42, 1705-1714.	2.8	29
42	Comment on Vickers et al.: Self-correlation between assimilation and respiration resulting from flux partitioning of eddy-covariance CO2 fluxes. Agricultural and Forest Meteorology, 2010, 150, 312-314.	1.9	28
43	Interspecific associations in seed arrival and seedling recruitment in a Neotropical forest. Ecology, 2016, 97, 2780-2790.	1.5	28
44	The interspecific growthâ€“mortality trade-off is not a general framework for tropical forest community structure. Nature Ecology and Evolution, 2021, 5, 174-183.	3.4	27
45	Inferring species interactions using Granger causality and convergent cross mapping. Theoretical Ecology, 2021, 14, 87-105.	0.4	26
46	Tree Circumference Dynamics in Four Forests Characterized Using Automated Dendrometer Bands. PLoS ONE, 2016, 11, e0169020.	1.1	25
47	Allometric constraints and competition enable the simulation of size structure and carbon fluxes in a dynamic vegetation model of tropical forests (LM3PPAâ€TV). Global Change Biology, 2020, 26, 4478-4494.	4.2	24
48	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
49	Functional traits of tropical trees and lianas explain spatial structure across multiple scales. Journal of Ecology, 2018, 106, 795-806.	1.9	21
50	Soil nitrogen concentration mediates the relationship between leguminous trees and neighbor diversity in tropical forests. Communications Biology, 2020, 3, 317.	2.0	20
51	Habitat hotspots of common and rare tropical species along climatic and edaphic gradients. Journal of Ecology, 2015, 103, 1325-1333.	1.9	19
52	Quantification and identification of lightning damage in tropical forests. Ecology and Evolution, 2017, 7, 5111-5122.	0.8	19
53	Multivariate Conditional Granger Causality Analysis for Lagged Response of Soil Respiration in a Temperate Forest. Entropy, 2013, 15, 4266-4284.	1.1	18
54	A metadata reporting framework (FRAMES) for synthesis of ecohydrological observations. Ecological Informatics, 2017, 42, 148-158.	2.3	18

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55	Optimal leaf life strategies determine V_{c,max} dynamic during ontogeny. New Phytologist, 2020, 228, 361-375.	3.5	18
56	Soils and topography control natural disturbance rates and thereby forest structure in a lowland tropical landscape. Ecology Letters, 2022, 25, 1126-1138.	3.0	18
57	Disentangling the Effects of Vapor Pressure Deficit and Soil Water Availability on Canopy Conductance in a Seasonal Tropical Forest During the 2015 El NiÃ±o Drought. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2021JD035004.	1.2	17
58	Maintenance of high diversity in mechanistic forest dynamics models of competition for light. Ecological Monographs, 2022, 92, .	2.4	16
59	Drones as a Tool for Monoculture Plantation Assessment in the Steepland Tropics. Forests, 2017, 8, 168.	0.9	15
60	Stabilization of species coexistence in spatial models through the aggregationâ€“segregation effect generated by local dispersal and nonspecific local interactions. Theoretical Population Biology, 2016, 112, 97-108.	0.5	14
61	Precipitation mediates sap flux sensitivity to evaporative demand in the neotropics. Oecologia, 2019, 191, 519-530.	0.9	14
62	Rates of formation and dissipation of clumping reveal lagged responses in tropical tree populations. Ecology, 2016, 97, 1170-1181.	1.5	12
63	Coupling Fine-Scale Root and Canopy Structure Using Ground-Based Remote Sensing. Remote Sensing, 2017, 9, 182.	1.8	12
64	Global biosphereâ€“climate interaction: a causal appraisal of observations and models over multiple temporal scales. Biogeosciences, 2019, 16, 4851-4874.	1.3	12
65	Do Nâ€fixing legumes promote neighbouring diversity in the tropics?. Journal of Ecology, 2019, 107, 229-239.	1.9	11
66	The pantropical response of soil moisture to El NiÃ±o. Hydrology and Earth System Sciences, 2020, 24, 2303-2322.	1.9	11
67	Liana optical traits increase tropical forest albedo and reduce ecosystem productivity. Global Change Biology, 2022, 28, 227-244.	4.2	10
68	Unveiling spatial and temporal heterogeneity of a tropical forest canopy using high-resolution NIRv, FCVI, and NIRvrad from UAS observations. Biogeosciences, 2021, 18, 6077-6091.	1.3	9
69	Modeling the Joint Effects of Vegetation Characteristics and Soil Properties on Ecosystem Dynamics in a Panama Tropical Forest. Journal of Advances in Modeling Earth Systems, 2022, 14, .	1.3	8
70	Plant hydraulics, stomatal control, and the response of a tropical forest to water stress over multiple temporal scales. Global Change Biology, 2022, 28, 4359-4376.	4.2	6