Dario Papale

List of Publications by Year in descending order

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144 papers	29,803 citations	19657 61 h-index	11052 137 g-index
190 all docs	190 docs citations	190 times ranked	20492 citing authors

#	Article	IF	Citations
1	Europe-wide reduction in primary productivity caused by the heat and drought in 2003. Nature, 2005, 437, 529-533.	27.8	3,245
2	On the separation of net ecosystem exchange into assimilation and ecosystem respiration: review and improved algorithm. Global Change Biology, 2005, 11, 1424-1439.	9.5	2,778
3	Terrestrial Gross Carbon Dioxide Uptake: Global Distribution and Covariation with Climate. Science, 2010, 329, 834-838.	12.6	2,056
4	Recent decline in the global land evapotranspiration trend due to limited moisture supply. Nature, 2010, 467, 951-954.	27.8	1,771
5	Climate extremes and the carbon cycle. Nature, 2013, 500, 287-295.	27.8	1,357
6	Reduction of forest soil respiration in response to nitrogen deposition. Nature Geoscience, 2010, 3, 315-322.	12.9	1,254
7	Towards a standardized processing of Net Ecosystem Exchange measured with eddy covariance technique: algorithms and uncertainty estimation. Biogeosciences, 2006, 3, 571-583.	3.3	1,206
8	Global patterns of land-atmosphere fluxes of carbon dioxide, latent heat, and sensible heat derived from eddy covariance, satellite, and meteorological observations. Journal of Geophysical Research, 2011, 116, .	3.3	933
9	CO₂ balance of boreal, temperate, and tropical forests derived from a global database. Global Change Biology, 2007, 13, 2509-2537.	9.5	863
10	Separation of net ecosystem exchange into assimilation and respiration using a light response curve approach: critical issues and global evaluation. Global Change Biology, 2010, 16, 187-208.	9.5	752
11	Comprehensive comparison of gap-filling techniques for eddy covariance net carbon fluxes. Agricultural and Forest Meteorology, 2007, 147, 209-232.	4.8	744
12	The FLUXNET2015 dataset and the ONEFlux processing pipeline for eddy covariance data. Scientific Data, 2020, 7, 225.	5.3	646
13	Evidence for soil water control on carbon and water dynamics in European forests during the extremely dry year: 2003. Agricultural and Forest Meteorology, 2007, 143, 123-145.	4.8	509
14	Reduction of ecosystem productivity and respiration during the European summer 2003 climate anomaly: a joint flux tower, remote sensing and modelling analysis. Global Change Biology, 2007, 13, 634-651.	9.5	486
15	Compensatory water effects link yearly global land CO2 sink changes to temperature. Nature, 2017, 541, 516-520.	27.8	480
16	A new assessment of European forests carbon exchanges by eddy fluxes and artificial neural network spatialization. Global Change Biology, 2003, 9, 525-535.	9.5	465
17	Predicting carbon dioxide and energy fluxes across global FLUXNET sites with regression algorithms. Biogeosciences, 2016, 13, 4291-4313.	3.3	447
18	Spatiotemporal patterns of terrestrial gross primary production: A review. Reviews of Geophysics, 2015, 53, 785-818.	23.0	432

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19	A data-driven analysis of energy balance closure across FLUXNET research sites: The role of landscape scale heterogeneity. Agricultural and Forest Meteorology, 2013, 171-172, 137-152.	4.8	424
20	Temporal and amongâ€site variability of inherent water use efficiency at the ecosystem level. Global Biogeochemical Cycles, 2009, 23, .	4.9	422
21	Nutrient availability as the key regulator of global forest carbon balance. Nature Climate Change, 2014, 4, 471-476.	18.8	383
22	The FLUXCOM ensemble of global land-atmosphere energy fluxes. Scientific Data, 2019, 6, 74.	5.3	337
23	Scaling carbon fluxes from eddy covariance sites to globe: synthesis and evaluation of the FLUXCOM approach. Biogeosciences, 2020, 17, 1343-1365.	3.3	323
24	Fertile forests produce biomass more efficiently. Ecology Letters, 2012, 15, 520-526.	6.4	273
25	Climate and vegetation controls on the surface water balance: Synthesis of evapotranspiration measured across a global network of flux towers. Water Resources Research, 2012, 48, .	4.2	254
26	Cross-site evaluation of eddy covariance GPP and RE decomposition techniques. Agricultural and Forest Meteorology, 2008, 148, 821-838.	4.8	248
27	The European carbon balance. Part 3: forests. Global Change Biology, 2010, 16, 1429-1450.	9.5	247
28	Determinants of terrestrial ecosystem carbon balance inferred from European eddy covariance flux sites. Geophysical Research Letters, 2007, 34, .	4.0	223
29	Patterns and controls of the variability of radiation use efficiency and primary productivity across terrestrial ecosystems. Global Ecology and Biogeography, 2010, 19, 253-267.	5.8	201
30	Quality control of CarboEurope flux data â€“ Part 1: Coupling footprint analyses with flux data quality assessment to evaluate sites in forest ecosystems. Biogeosciences, 2008, 5, 433-450.	3.3	192
31	A full greenhouse gases budget of Africa: synthesis, uncertainties, and vulnerabilities. Biogeosciences, 2014, 11, 381-407.	3.3	162
32	Aboveâ€ground woody carbon sequestration measured from tree rings is coherent with net ecosystem productivity at five eddyâ€covariance sites. New Phytologist, 2014, 201, 1289-1303.	7.3	152
33	Discrimination of tropical forest types, dominant species, and mapping of functional guilds by hyperspectral and simulated multispectral Sentinel-2 data. Remote Sensing of Environment, 2016, 176, 163-176.	11.0	145
34	Remote estimation of carbon dioxide uptake by a Mediterranean forest. Global Change Biology, 2008, 14, 2860-2867.	9.5	139
35	Relative humidity effects on water vapour fluxes measured with closed-path eddy-covariance systems with short sampling lines. Agricultural and Forest Meteorology, 2012, 165, 53-63.	4.8	138
36	Analyzing the causes and spatial pattern of the European 2003 carbon flux anomaly using seven models. Biogeosciences, 2008, 5, 561-583.	3.3	136

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37	Statistical properties of random CO2 flux measurement uncertainty inferred from model residuals. Agricultural and Forest Meteorology, 2008, 148, 38-50.	4.8	128
38	Semiempirical modeling of abiotic and biotic factors controlling ecosystem respiration across eddy covariance sites. Global Change Biology, 2011, 17, 390-409.	9.5	128
39	Use of change-point detection for frictionâ€“velocity threshold evaluation in eddy-covariance studies. Agricultural and Forest Meteorology, 2013, 171-172, 31-45.	4.8	126
40	Implications of the carbon cycle steady state assumption for biogeochemical modeling performance and inverse parameter retrieval. Global Biogeochemical Cycles, 2008, 22, .	4.9	113
41	Natural land carbon dioxide exchanges in the ECMWF integrated forecasting system: Implementation and offline validation. Journal of Geophysical Research D: Atmospheres, 2013, 118, 5923-5946.	3.3	113
42	Influences of observation errors in eddy flux data on inverse model parameter estimation. Biogeosciences, 2008, 5, 1311-1324.	3.3	112
43	Temperature sensitivity of decomposition in relation to soil organic matter pools: critique and outlook. Biogeosciences, 2005, 2, 317-321.	3.3	110
44	On the differential advantages of evergreenness and deciduousness in mediterranean oak woodlands: a flux perspective. Ecological Applications, 2010, 20, 1583-1597.	3.8	109
45	Biomass production efficiency controlled by management in temperate and boreal ecosystems. Nature Geoscience, 2015, 8, 843-846.	12.9	109
46	Mean annual GPP of Europe derived from its water balance. Geophysical Research Letters, 2007, 34, .	4.0	104
47	Uncertainty analysis of gross primary production upscaling using Random Forests, remote sensing and eddy covariance data. Remote Sensing of Environment, 2015, 168, 360-373.	11.0	103
48	Filling the gaps in meteorological continuous data measured at FLUXNET sites with ERA-Interim reanalysis. Earth System Science Data, 2015, 7, 157-171.	9.9	103
49	Above-ground biomass prediction by Sentinel-1 multitemporal data in central Italy with integration of ALOS2 and Sentinel-2 data. Journal of Applied Remote Sensing, 2018, 12, 1.	1.3	101
50	The three major axes of terrestrial ecosystem function. Nature, 2021, 598, 468-472.	27.8	99
51	Combining remote sensing and ancillary data to monitor the gross productivity of water-limited forest ecosystems. Remote Sensing of Environment, 2009, 113, 657-667.	11.0	98
52	Interpreting canopy development and physiology using a European phenology camera network at flux sites. Biogeosciences, 2015, 12, 5995-6015.	3.3	98
53	Widespread inhibition of daytime ecosystem respiration. Nature Ecology and Evolution, 2019, 3, 407-415.	7.8	98
54	Global distribution of groundwaterâ€“vegetation spatial covariation. Geophysical Research Letters, 2017, 44, 4134-4142.	4.0	91

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55	Evaluating the convergence between eddy-covariance and biometric methods for assessing carbon budgets of forests. Nature Communications, 2016, 7, 13717.	12.8	90
56	Diagnostic assessment of European gross primary production. Global Change Biology, 2008, 14, 2349-2364.	9.5	86
57	FLUXNET-CH₄: a global, multi-ecosystem dataset and analysis of methane seasonality from freshwater wetlands. Earth System Science Data, 2021, 13, 3607-3689.	9.9	79
58	Identification of vegetation and soil carbon pools out of equilibrium in a process model via eddy covariance and biometric constraints. Global Change Biology, 2010, 16, 2813-2829.	9.5	77
59	Matching the phenology of Net Ecosystem Exchange and vegetation indices estimated with MODIS and FLUXNET in-situ observations. Remote Sensing of Environment, 2016, 174, 290-300.	11.0	76
60	Photosynthesis drives anomalies in net carbon-exchange of pine forests at different latitudes. Global Change Biology, 2007, 13, 2110-2127.	9.5	69
61	Operational monitoring of daily evapotranspiration by the combination of MODIS NDVI and ground meteorological data: Application and evaluation in Central Italy. Remote Sensing of Environment, 2014, 152, 279-290.	11.0	65
62	Effect of spatial sampling from European flux towers for estimating carbon and water fluxes with artificial neural networks. Journal of Geophysical Research G: Biogeosciences, 2015, 120, 1941-1957.	3.0	65
63	Remote sensing of ecosystem light use efficiency with MODIS-based PRI. Biogeosciences, 2011, 8, 189-202.	3.3	64
64	Atmospheric deposition, CO2, and change in the land carbon sink. Scientific Reports, 2017, 7, 9632.	3.3	62
65	Eddy covariance raw data processing for CO2 and energy fluxes calculation at ICOS ecosystem stations. International Agrophysics, 2018, 32, 495-515.	1.7	62
66	Toward a consistency crossâ€ check of eddy covariance fluxâ€“based and biometric estimates of ecosystem carbon balance. Global Biogeochemical Cycles, 2009, 23, .	4.9	61
67	ICOS eddy covariance flux-station site setup: a review. International Agrophysics, 2018, 32, 471-494.	1.7	59
68	Reviews and syntheses: An empirical spatiotemporal description of the global surfaceâ€“atmosphere carbon fluxes: opportunities and data limitations. Biogeosciences, 2017, 14, 3685-3703.	3.3	58
69	Inferring plant functional diversity from space: the potential of Sentinel-2. Remote Sensing of Environment, 2019, 233, 111368.	11.0	56
70	The European land and inland water CO₂, CO, CH₄ and N₂O balance between 2001 and 2005. Biogeosciences, 2012, 9, 3357-3380.	3.3	53
71	Potential of ALOS2 and NDVI to Estimate Forest Above-Ground Biomass, and Comparison with Lidar-Derived Estimates. Remote Sensing, 2017, 9, 18.	4.0	50
72	Wind as a main driver of the net ecosystem carbon balance of a semiarid <scp>M</scp>editerranean steppe in the <scp>S</scp>outh <scp>E</scp>ast of <scp>S</scp>pain. Global Change Biology, 2012, 18, 539-554.	9.5	49

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73	A New Data Set to Keep a Sharper Eye on Land-Air Exchanges. Eos, 2017, , .	0.1	46
74	On the choice of the driving temperature for eddy-covariance carbon dioxide flux partitioning. Biogeosciences, 2012, 9, 5243-5259.	3.3	45
75	Net CO2 exchange rates in three different successional stages of the "Dark Taiga" of central Siberia. Tellus, Series B: Chemical and Physical Meteorology, 2002, 54, 642-654.	1.6	44
76	The Integrated Carbon Observation System in Europe. Bulletin of the American Meteorological Society, 2022, 103, E855-E872.	3.3	44
77	Temporal variability of the NPP-GPP ratio at seasonal and interannual time scales in a temperate beech forest. Biogeosciences, 2011, 8, 2481-2492.	3.3	43
78	Simulation of grassland productivity by the combination of ground and satellite data. Agriculture, Ecosystems and Environment, 2013, 165, 163-172.	5.3	43
79	Characterizing ecosystem-atmosphere interactions from short to interannual time scales. Biogeosciences, 2007, 4, 743-758.	3.3	42
80	Drought Influences the Accuracy of Simulated Ecosystem Fluxes: A Model-Data Meta-analysis for Mediterranean Oak Woodlands. Ecosystems, 2013, 16, 749-764.	3.4	42
81	Partitioning net carbon dioxide fluxes into photosynthesis and respiration using neural networks. Global Change Biology, 2020, 26, 5235-5253.	9.5	42
82	Experimental validation of footprint models for eddy covariance CO2 flux measurements above grassland by means of natural and artificial tracers. Agricultural and Forest Meteorology, 2017, 242, 75-84.	4.8	39
83	Biometric and eddy covariance-based assessment of decadal carbon sequestration of a temperate Scots pine forest. Agricultural and Forest Meteorology, 2013, 174-175, 135-143.	4.8	38
84	Above ground biomass and tree species richness estimation with airborne lidar in tropical Ghana forests. International Journal of Applied Earth Observation and Geoinformation, 2016, 52, 371-379.	2.8	36
85	Detecting impacts of extreme events with ecological inÂsitu monitoring networks. Biogeosciences, 2017, 14, 4255-4277.	3.3	35
86	Ancillary vegetation measurements at ICOS ecosystem stations. International Agrophysics, 2018, 32, 645-664.	1.7	35
87	Substantial hysteresis in emergent temperature sensitivity of global wetland CH4 emissions. Nature Communications, 2021, 12, 2266.	12.8	34
88	Gap-filling eddy covariance methane fluxes: Comparison of machine learning model predictions and uncertainties at FLUXNET-CH4 wetlands. Agricultural and Forest Meteorology, 2021, 308-309, 108528.	4.8	33
89	Carbon balance assessment of a natural steppe of southern Siberia by multiple constraint approach. Biogeosciences, 2007, 4, 581-595.	3.3	32
90	Assessing and improving the representativeness of monitoring networks: The European flux tower network example. Journal of Geophysical Research, 2011, 116, .	3.3	32

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91	Nighttime Flux Correction. , 2012, , 133-157.		31
92	Evaluating the potential of large-scale simulations to predict carbon fluxes of terrestrial ecosystems over a European Eddy Covariance network. Biogeosciences, 2014, 11, 2661-2678.	3.3	30
93	Impact of CO 2 storage flux sampling uncertainty on net ecosystem exchange measured by eddy covariance. Agricultural and Forest Meteorology, 2018, 248, 228-239.	4.8	30
94	Tree height in tropical forest as measured by different ground, proximal, and remote sensing instruments, and impacts on above ground biomass estimates. International Journal of Applied Earth Observation and Geoinformation, 2019, 82, 101899.	2.8	30
95	Predicting changes in soil organic carbon in mediterranean and alpine forests during the Kyoto Protocol commitment periods using the CENTURY model. Soil Use and Management, 2010, 26, 475-484.	4.9	29
96	Greenhouse gas balance of cropland conversion to bioenergy poplar short-rotation coppice. Biogeosciences, 2016, 13, 95-113.	3.3	29
97	Modeling Ambitions Outpace Observations of Forest Carbon Allocation. Trends in Plant Science, 2021, 26, 210-219.	8.8	29
98	Availability, accessibility, quality and comparability of monitoring data for European forests for use in air pollution and climate change science. IForest, 2011, 4, 162-166.	1.4	28
99	Deciphering the components of regional net ecosystem fluxes following a bottom-up approach for the Iberian Peninsula. Biogeosciences, 2010, 7, 3707-3729.	3.3	27
100	The role of photo- and thermal degradation for CO₂ and CO fluxes in an arid ecosystem. Biogeosciences, 2015, 12, 4161-4174.	3.3	26
101	Estimating daily forest carbon fluxes using a combination of ground and remotely sensed data. Journal of Geophysical Research G: Biogeosciences, 2016, 121, 266-279.	3.0	26
102	Eddy-covariance flux errors due to biases in gas concentration measurements: origins, quantification and correction. Biogeosciences, 2014, 11, 1037-1051.	3.3	24
103	Observational Data Patterns for Time Series Data Quality Assessment. , 2014, , .		24
104	Towards a transnational system of supersites for forest monitoring and research in Europe - an overview on present state and future recommendations. IForest, 2011, 4, 167-171.	1.4	23
105	Satellite open data to monitor forest damage caused by extreme climate-induced events: a case study of the Vaia storm in Northern Italy. Forestry, 2021, 94, 407-416.	2.3	23
106	The role of trace gas flux networks in the biogeosciences. Eos, 2012, 93, 217-218.	0.1	22
107	On the relationship between ecosystem-scale hyperspectral reflectance and CO₂ exchange in European mountain grasslands. Biogeosciences, 2015, 12, 3089-3108.	3.3	21
108	Vegetation optical depth at L-band and above ground biomass in the tropical range: Evaluating their relationships at continental and regional scales. International Journal of Applied Earth Observation and Geoinformation, 2019, 77, 151-161.	2.8	20

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109	Ideas and perspectives: enhancing the impact of the FLUXNET network of eddy covariance sites. Biogeosciences, 2020, 17, 5587-5598.	3.3	19
110	State-dependent errors in a land surface model across biomes inferred from eddy covariance observations on multiple timescales. Ecological Modelling, 2012, 246, 11-25.	2.5	18
111	Correction of a 1 km daily rainfall dataset for modelling forest ecosystem processes in Italy. Meteorological Applications, 2016, 23, 294-303.	2.1	18
112	The ecosystem carbon sink implications of mountain forest expansion into abandoned grazing land: The role of subsoil and climatic factors. Science of the Total Environment, 2019, 672, 106-120.	8.0	18
113	Database Maintenance, Data Sharing Policy, Collaboration. , 2012, , 399-424.		17
114	Data Gap Filling. , 2012, , 159-172.		16
115	A robust data cleaning procedure for eddy covariance flux measurements. Biogeosciences, 2020, 17, 1367-1391.	3.3	15
116	Monitoring tropical forests under a functional perspective with satelliteâ€based vegetation optical depth. Global Change Biology, 2020, 26, 3402-3416.	9.5	15
117	Geologic carbon sources may confound ecosystem carbon balance estimates: Evidence from a semiarid steppe in the southeast of Spain. Journal of Geophysical Research, 2012, 117, .	3.3	14
118	Assimilating phenology datasets automatically across ICOS ecosystem stations. International Agrophysics, 2018, 32, 677-687.	1.7	14
119	Partitioning the net ecosystem carbon balance of a semiarid steppe into biological and geological components. Biogeochemistry, 2014, 118, 83-101.	3.5	12
120	Diel variation in isotopic composition of soil respiratory CO 2 fluxes: The role of non-steady state conditions. Agricultural and Forest Meteorology, 2017, 234-235, 95-105.	4.8	11
121	A comparison of different methods for assessing leaf area index in four canopy types. Central European Forestry Journal, 2019, 65, 67-80.	0.8	10
122	ASPIS, A Flexible Multispectral System for Airborne Remote Sensing Environmental Applications. Sensors, 2008, 8, 3240-3256.	3.8	8
123	Early mapping of industrial tomato in Central and Southern Italy with Sentinel 2, aerial and RapidEye additional data. Journal of Agricultural Science, 2018, 156, 396-407.	1.3	8
124	Carbon, Water and Energy Fluxes of Terrestrial Ecosystems in Italy. Environmental Science and Engineering, 2015, , 11-45.	0.2	8
125	Importance of reporting ancillary site characteristics, and management and disturbance information at ICOS stations. International Agrophysics, 2018, 32, 457-469.	1.7	8
126	Effects of the Gill-Solent WindMaster-Pro â€œw-boostâ€•firmware bug on eddy covariance fluxes and some simple recovery strategies. Agricultural and Forest Meteorology, 2019, 265, 145-151.	4.8	7

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127	A Multiple Imputation Strategy for Eddy Covariance Data. Journal of Environmental Informatics, 0, , .	6.0	7
128	Soil carbon dynamics in a Mediterranean forest during the Kyoto Protocol commitment periods. Regional Environmental Change, 2011, 11, 371-376.	2.9	6
129	Species dominance and above ground biomass in the BiaÅ‚owieÅ¼a Forest, Poland, described by airborne hyperspectral and lidar data. International Journal of Applied Earth Observation and Geoinformation, 2020, 92, 102178.	2.8	6
130	Correction to â€œGlobal patterns of landâ€atmosphere fluxes of carbon dioxide, latent heat, and sensible heat derived from eddy covariance, satellite, and meteorological observationsâ€• Journal of Geophysical Research, 2012, 117, .	3.3	5
131	Modelling random uncertainty of eddy covariance flux measurements. Stochastic Environmental Research and Risk Assessment, 2019, 33, 725-746.	4.0	5
132	COSMO-SkyMed potential to detect and monitor Mediterranean maquis fires and regrowth: a pilot study in Capo Figari, Sardinia, Italy. IForest, 2018, 11, 389-395.	1.4	5
133	Net CO₂ exchange rates in three different successional stages of the “Dark Taiga” of central Siberia. Tellus, Series B: Chemical and Physical Meteorology, 2022, 54, 642.	1.6	4
134	Hunting Data Rogues at Scale: Data Quality Control for Observational Data in Research Infrastructures. , 2017, , .		4
135	Ideas and perspectives: Enhancing research and monitoring of carbon pools and land-to-atmosphere greenhouse gases exchange in developing countries. Biogeosciences, 2022, 19, 1435-1450.	3.3	4
136	Eddy covariance flux errors due to random and systematic timing errors during data acquisition. Biogeosciences, 2018, 15, 5473-5487.	3.3	3
137	Global nature run data with realistic high-resolution carbon weather for the year of the Paris Agreement. Scientific Data, 2022, 9, 160.	5.3	3
138	Reply to 'Uncertain effects of nutrient availability on global forest carbon balance' and 'Data quality and the role of nutrients in forest carbon-use efficiency'. Nature Climate Change, 2015, 5, 960-961.	18.8	2
139	Ranking drivers of global carbon and energy fluxes over land. , 2015, , .		2
140	Radiocarbon-Based Assessment of Heterotrophic Soil Respiration in Two Mediterranean Forests. Ecosystems, 2016, 19, 62-72.	3.4	2
141	SMOS Vegetation Optical Depth and Ecosystem Functional Properties: Exploring Their Relationships in Tropical Forests. , 2018, , .		1
142	Spatial and temporal assessment of biospheric carbon fluxes at a continental scale by neural-network optimization.. , 2004, , 203-230.		1
143	Airborne remote sensing in precision viticolture: assessment of quality and quantity vineyard production using multispectral imagery: a case study in Velletri, Rome surroundings (central Italy). , 2009, , .		0
144	Case Study: ENVRI Science Demonstrators with D4Science. Lecture Notes in Computer Science, 2020, , 307-323.	1.3	0