

Denis Loustau

List of Publications by Year in descending order

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Version: 2024-02-01

99
papers

18,444
citations

44444

50
h-index

39744

98
g-index

110
all docs

110
docs citations

110
times ranked

17993
citing authors

#	ARTICLE	IF	CITATIONS
1	Environmental control of land-atmosphere CO ₂ fluxes from temperate ecosystems: a statistical approach based on homogenized time series from five land-use types. <i>Tellus, Series B: Chemical and Physical Meteorology</i> , 2022, 72, 1784689.	0.8	4
2	The Integrated Carbon Observation System in Europe. <i>Bulletin of the American Meteorological Society</i> , 2022, 103, E855-E872.	1.7	44
3	Uncovering the critical soil moisture thresholds of plant water stress for European ecosystems. <i>Global Change Biology</i> , 2022, 28, 2111-2123.	4.2	23
4	Quantifying canopy conductance in a pine forest during drought from combined sap flow and canopy surface temperature measurements. <i>Agricultural and Forest Meteorology</i> , 2022, 323, 108997.	1.9	6
5	Method comparison of indirect assessments of understory leaf area index (LAI): A case study across the extended network of ICOS forest ecosystem sites in Europe. <i>Ecological Indicators</i> , 2021, 128, 107841.	2.6	12
6	Retrieval and validation of forest background reflectivity from daily Moderate Resolution Imaging Spectroradiometer (MODIS) bidirectional reflectance distribution function (BRDF) data across European forests. <i>Biogeosciences</i> , 2021, 18, 621-635.	1.3	12
7	DynACof: A process-based model to study growth, yield and ecosystem services of coffee agroforestry systems. <i>Environmental Modelling and Software</i> , 2020, 124, 104609.	1.9	26
8	The FLUXNET2015 dataset and the ONEFlux processing pipeline for eddy covariance data. <i>Scientific Data</i> , 2020, 7, 225.	2.4	646
9	Altered energy partitioning across terrestrial ecosystems in the European drought year 2018. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2020, 375, 20190524.	1.8	35
10	Carbon-nitrogen interactions in European forests and semi-natural vegetation Part 1: Fluxes and budgets of carbon, nitrogen and greenhouse gases from ecosystem monitoring and modelling. <i>Biogeosciences</i> , 2020, 17, 1583-1620.	1.3	21
11	Carbon-nitrogen interactions in European forests and semi-natural vegetation Part 2: Untangling climatic, edaphic, management and nitrogen deposition effects on carbon sequestration potentials. <i>Biogeosciences</i> , 2020, 17, 1621-1654.	1.3	18
12	The PROFOUND Database for evaluating vegetation models and simulating climate impacts on European forests. <i>Earth System Science Data</i> , 2020, 12, 1295-1320.	3.7	33
13	Energy, water and carbon exchanges in managed forest ecosystems: description, sensitivity analysis and evaluation of the INRAE GO+ model, version 3.0. <i>Geoscientific Model Development</i> , 2020, 13, 5973-6009.	1.3	6
14	Importance of the vegetation-groundwater-stream continuum to understand transformation of biogenic carbon in aquatic systems A case study based on a pine-maize comparison in a lowland sandy watershed (Landes de Gascogne, SW France). <i>Science of the Total Environment</i> , 2019, 661, 613-629.	3.9	14
15	Measuring and modelling energy partitioning in canopies of varying complexity using MAESPA model. <i>Agricultural and Forest Meteorology</i> , 2018, 253-254, 203-217.	1.9	24
16	The AQUIC Soil Moisture Network for Satellite Microwave Remote Sensing Validation in South-Western France. <i>Remote Sensing</i> , 2018, 10, 1839.	1.8	20
17	The Aquic Network: Soil Moisture Sites in the Les Landes Forest and Graves Vineyards (Bordeaux) Tj ETQq1 1 0.784314,rgBT /Over		
18	Hydro-ecological controls on dissolved carbon dynamics in groundwater and export to streams in a temperate pine forest. <i>Biogeosciences</i> , 2018, 15, 669-691.	1.3	23

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19	Modelling the nutrient cost of biomass harvesting under different silvicultural and climate scenarios in production forests. <i>Forest Ecology and Management</i> , 2018, 429, 642-653.	1.4	12
20	ICOS eddy covariance flux-station site setup: a review. <i>International Agrophysics</i> , 2018, 32, 471-494.	0.7	59
21	Soil sampling and preparation for monitoring soil carbon. <i>International Agrophysics</i> , 2018, 32, 633-643.	0.7	12
22	Ancillary vegetation measurements at ICOS ecosystem stations. <i>International Agrophysics</i> , 2018, 32, 645-664.	0.7	35
23	Sampling and collecting foliage elements for the determination of the foliar nutrients in ICOS ecosystem stations. <i>International Agrophysics</i> , 2018, 32, 665-676.	0.7	4
24	Stand age and species richness dampen interannual variation of ecosystem-level photosynthetic capacity. <i>Nature Ecology and Evolution</i> , 2017, 1, 48.	3.4	85
25	Dimensioning IRGA gas sampling systems: laboratory and field experiments. <i>Atmospheric Measurement Techniques</i> , 2016, 9, 1361-1367.	1.2	15
26	Evaluating the performance of land surface model ORCHIDEE-CANv1.0 on water and energy flux estimation with a single- and multi-layer energy budget scheme. <i>Geoscientific Model Development</i> , 2016, 9, 2951-2972.	1.3	43
27	Future challenges in coupled C-N-P cycle models for terrestrial ecosystems under global change: a review. <i>Biogeochemistry</i> , 2016, 131, 173-202.	1.7	75
28	Tamm Review: Light use efficiency and carbon storage in nutrient and water experiments on major forest plantation species. <i>Forest Ecology and Management</i> , 2016, 376, 333-342.	1.4	25
29	Land management and land-cover change have impacts of similar magnitude on surface temperature. <i>Nature Climate Change</i> , 2014, 4, 389-393.	8.1	404
30	Modeling nitrous oxide emissions from tile-drained winter wheat fields in Central France. <i>Nutrient Cycling in Agroecosystems</i> , 2014, 98, 27-40.	1.1	9
31	Water use of young maritime pine and <i>Eucalyptus</i> stands in response to climatic drying in south-western France. <i>Plant Ecology and Diversity</i> , 2013, 6, 57-71.	1.0	5
32	Does canopy mean nitrogen concentration explain variation in canopy light use efficiency across 14 contrasting forest sites?. <i>Tree Physiology</i> , 2012, 32, 200-218.	1.4	23
33	Modeling the ecohydrological processes in the Landes de Gascogne, SW France. , 2012, , .		1
34	Ground-based Network of NDVI measurements for tracking temporal dynamics of canopy structure and vegetation phenology in different biomes. <i>Remote Sensing of Environment</i> , 2012, 123, 234-245.	4.6	161
35	Thermal optimality of net ecosystem exchange of carbon dioxide and underlying mechanisms. <i>New Phytologist</i> , 2012, 194, 775-783.	3.5	111
36	Spatial and temporal CO ₂ exchanges measured by Eddy Covariance over a temperate intertidal flat and their relationships to net ecosystem production. <i>Biogeosciences</i> , 2012, 9, 249-268.	1.3	39

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37	Seasonal variations of belowground carbon transfer assessed by in situ ^{13}C pulse labelling of trees. <i>Biogeosciences</i> , 2011, 8, 1153-1168.	1.3	81
38	<i>In situ</i> assessment of the velocity of carbon transfer by tracing ^{13}C in trunk CO_2 efflux after pulse labelling: variations among tree species and seasons. <i>New Phytologist</i> , 2011, 190, 181-192.	3.5	89
39	Generalized biomass equations for the main aboveground biomass components of maritime pine across contrasting environments. <i>Annals of Forest Science</i> , 2011, 68, 443.	0.8	52
40	Paired comparison of water, energy and carbon exchanges over two young maritime pine stands (<i>Pinus</i>) Tj ETQq0 0 0 rgBT /Overlock 10 31, 903-921.	1.4	43
41	Photosynthetic carbon isotope discrimination and its relationship to the carbon isotope signals of stem, soil and ecosystem respiration. <i>New Phytologist</i> , 2010, 188, 576-589.	3.5	119
42	The European carbon balance. Part 3: forests. <i>Global Change Biology</i> , 2010, 16, 1429-1450.	4.2	247
43	Observing the Forest Canopy with a New Ultra-Violet Compact Airborne Lidar. <i>Sensors</i> , 2010, 10, 7386-7403.	2.1	16
44	Simultaneous measurements of CO_2 and water exchanges over three agroecosystems in South-West France. <i>Biogeosciences</i> , 2009, 6, 2957-2971.	1.3	22
45	Carbon stable isotope ratio of phloem sugars in mature pine trees throughout the growing season: comparison of two extraction methods. <i>Rapid Communications in Mass Spectrometry</i> , 2009, 23, 2511-2518.	0.7	34
46	A single-substrate model to interpret intra-annual stable isotope signals in tree-ring cellulose. <i>Plant, Cell and Environment</i> , 2009, 32, 1071-1090.	2.8	100
47	Établissement d'équations prédisant la concentration en nutriments des compartiments de l'arbre en vue d'une amélioration des modalités d'exportation de nutriments par récolte de biomasse. <i>Annals of Forest Science</i> , 2008, 65, 808-808.	0.8	44
48	Manipulation de la disponibilité en eau et éléments minéraux dans une plantation de pins maritimes: effet sur la croissance, la production, l'allocation de la biomasse à la fermeture du couvert. <i>Annals of Forest Science</i> , 2008, 65, 814-814.	0.8	43
49	Magnani et al. reply. <i>Nature</i> , 2008, 451, E3-E4.	13.7	20
50	Developing an empirical model of stand GPP with the LUE approach: analysis of eddy covariance data at five contrasting conifer sites in Europe. <i>Global Change Biology</i> , 2008, 14, 92-108.	4.2	132
51	Carbon dioxide and energy flux partitioning between the understorey and the overstorey of a maritime pine forest during a year with reduced soil water availability. <i>Agricultural and Forest Meteorology</i> , 2008, 148, 1508-1523.	1.9	51
52	Evidence for soil water control on carbon and water dynamics in European forests during the extremely dry year: 2003. <i>Agricultural and Forest Meteorology</i> , 2007, 143, 123-145.	1.9	509
53	Partitioning forest carbon fluxes with overstorey and understorey eddy-covariance measurements: A synthesis based on FLUXNET data. <i>Agricultural and Forest Meteorology</i> , 2007, 144, 14-31.	1.9	138
54	The human footprint in the carbon cycle of temperate and boreal forests. <i>Nature</i> , 2007, 447, 849-851.	13.7	868

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55	Reduction of ecosystem productivity and respiration during the European summer 2003 climate anomaly: a joint flux tower, remote sensing and modelling analysis. <i>Global Change Biology</i> , 2007, 13, 634-651.	4.2	486
56	Photosynthesis drives anomalies in net carbon-exchange of pine forests at different latitudes. <i>Global Change Biology</i> , 2007, 13, 2110-2127.	4.2	69
57	CO ₂ balance of boreal, temperate, and tropical forests derived from a global database. <i>Global Change Biology</i> , 2007, 13, 2509-2537.	4.2	863
58	The likely impact of elevated [CO ₂], nitrogen deposition, increased temperature and management on carbon sequestration in temperate and boreal forest ecosystems: a literature review. <i>New Phytologist</i> , 2007, 173, 463-480.	3.5	579
59	Sensitivity of water and carbon fluxes to climate changes from 1960 to 2100 in European forest ecosystems. <i>Agricultural and Forest Meteorology</i> , 2006, 141, 35-56.	1.9	100
60	The CarboEurope Regional Experiment Strategy. <i>Bulletin of the American Meteorological Society</i> , 2006, 87, 1367-1380.	1.7	101
61	On the separation of net ecosystem exchange into assimilation and ecosystem respiration: review and improved algorithm. <i>Global Change Biology</i> , 2005, 11, 1424-1439.	4.2	2,778
62	Europe-wide reduction in primary productivity caused by the heat and drought in 2003. <i>Nature</i> , 2005, 437, 529-533.	13.7	3,245
63	Agrometeorological Research and Applications Needed to Prepare Agriculture and Forestry to 21st Century Climate Change. <i>Climatic Change</i> , 2005, 70, 319-340.	1.7	23
64	Interactive effects of phosphorus and light availability on early growth of maritime pine seedlings. <i>Annals of Forest Science</i> , 2005, 62, 575-583.	0.8	16
65	Variation of the photosynthetic capacity across a chronosequence of maritime pine correlates with needle phosphorus concentration. <i>Annals of Forest Science</i> , 2005, 62, 537-543.	0.8	24
66	Modeling climate change effects on the potential production of French plains forests at the sub-regional level. <i>Tree Physiology</i> , 2005, 25, 813-823.	1.4	103
67	Age-related decline in stand water use: sap flow and transpiration in a pine forest chronosequence. <i>Agricultural and Forest Meteorology</i> , 2005, 129, 105-119.	1.9	165
68	Carbon balance of coniferous forests growing in contrasting climates: Model-based analysis. <i>Agricultural and Forest Meteorology</i> , 2005, 131, 97-124.	1.9	65
69	Radial profiles of sap flow with increasing tree size in maritime pine. <i>Tree Physiology</i> , 2004, 24, 1285-1293.	1.4	123
70	Hydraulic responses to height growth in maritime pine trees. <i>Plant, Cell and Environment</i> , 2004, 27, 1077-1087.	2.8	120
71	Paired comparisons of carbon exchange between undisturbed and regenerating stands in four managed forests in Europe. <i>Global Change Biology</i> , 2004, 10, 1707-1723.	4.2	135
72	Stomatal conductance and root-to-shoot signalling in chestnut saplings exposed to <i>Phytophthora cinnamomi</i> or partial soil drying. <i>Functional Plant Biology</i> , 2004, 31, 41.	1.1	35

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73	The annual carbon budget of a French pine forest (<i>Pinus pinaster</i>) following harvest. <i>Global Change Biology</i> , 2003, 9, 1051-1065.	4.2	106
74	MuSICA, a CO ₂ , water and energy multilayer, multileaf pine forest model: evaluation from hourly to yearly time scales and sensitivity analysis. <i>Global Change Biology</i> , 2003, 9, 697-717.	4.2	139
75	Variability of stem and branch maintenance respiration in a <i>Pinus pinaster</i> tree. <i>Tree Physiology</i> , 2003, 23, 227-236.	1.4	50
76	Allometric relationships for branch and tree woody biomass of Maritime pine (<i>Pinus pinaster</i> Ait.). <i>Forest Ecology and Management</i> , 2002, 158, 71-83.	1.4	101
77	Osmotic adjustment in <i>Pinus pinaster</i> cuttings in response to a soil drying cycle. <i>Annals of Forest Science</i> , 2002, 59, 795-799.	0.8	18
78	Evaluation of six process-based forest growth models using eddy-covariance measurements of CO ₂ and H ₂ O fluxes at six forest sites in Europe. <i>Global Change Biology</i> , 2002, 8, 213-230.	4.2	135
79	Temperature response of parameters of a biochemically based model of photosynthesis. I. Seasonal changes in mature maritime pine (<i>Pinus pinaster</i> Ait.). <i>Plant, Cell and Environment</i> , 2002, 25, 1155-1165.	2.8	208
80	Temperature response of parameters of a biochemically based model of photosynthesis. II. A review of experimental data. <i>Plant, Cell and Environment</i> , 2002, 25, 1167-1179.	2.8	685
81	Effects of variable root damage caused by <i>Phytophthora cinnamomi</i> on water relations of chestnut saplings. <i>Annals of Forest Science</i> , 2001, 58, 639-651.	0.8	31
82	Carbon balance gradient in European forests: should we doubt "surprising" results? A reply to Piovesan & Adams. <i>Journal of Vegetation Science</i> , 2001, 12, 145-150.	1.1	24
83	Estimating the foliage area of Maritime pine (<i>Pinus pinaster</i> Ait.) branches and crowns with application to modelling the foliage area distribution in the crown. <i>Annals of Forest Science</i> , 2000, 57, 73-86.	0.8	80
84	A generic model of forest canopy conductance dependent on climate, soil water availability and leaf area index. <i>Annals of Forest Science</i> , 2000, 57, 755-765.	0.8	248
85	Respiration as the main determinant of carbon balance in European forests. <i>Nature</i> , 2000, 404, 861-865.	13.7	1,438
86	The importance of phenology for the evaluation of impact of climate change on growth of boreal, temperate and Mediterranean forests ecosystems: an overview. <i>International Journal of Biometeorology</i> , 2000, 44, 67-75.	1.3	330
87	Photosynthetic responses to phosphorus nutrition in two-year-old maritime pine seedlings. <i>Tree Physiology</i> , 1999, 19, 707-715.	1.4	81
88	Variability of the photosynthetic characteristics of mature needles within the crown of a 25-year-old <i>Pinus pinaster</i> . <i>Tree Physiology</i> , 1998, 18, 223-232.	1.4	79
89	Within-ring $\delta^{13}\text{C}$ spatial variability and interannual variations in wood cellulose of two contrasting provenances of <i>Pinus pinaster</i> . <i>Canadian Journal of Forest Research</i> , 1998, 28, 766-773.	0.8	33
90	Interpreting the variations in xylem sap flux density within the trunk of maritime pine (<i>Pinus pinaster</i>). <i>Sciences Forestières</i> , 1998, 55, 29-46.	1.1	82

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91	Within-ring $\delta^{13}C$ spatial variability and interannual variations in wood cellulose of two contrasting provenances of <i>Pinus pinaster</i> . Canadian Journal of Forest Research, 1998, 28, 766-773.	0.8	29
92	Transpiration of a 64-year-old maritime pine stand in Portugal. Oecologia, 1996, 107, 33-42.	0.9	179
93	Transpiration of a 64-year old maritime pine stand in Portugal. Oecologia, 1996, 107, 43-52.	0.9	56
94	Growth and uptake of mineral elements in response to sodium chloride of three provenances of maritime pine. Journal of Plant Nutrition, 1995, 18, 243-256.	0.9	18
95	Measuring and modelling the transpiration of a maritime pine canopy from sap-flow data. Agricultural and Forest Meteorology, 1994, 71, 61-81.	1.9	230
96	Interception loss, throughfall and stemflow in a maritime pine stand. I. Variability of throughfall and stemflow beneath the pine canopy. Journal of Hydrology, 1992, 138, 449-467.	2.3	116
97	Interception loss, throughfall and stemflow in a maritime pine stand. II. An application of Gash's analytical model of interception. Journal of Hydrology, 1992, 138, 469-485.	2.3	78
98	Comparison of two methods for estimating the evaporation of a <i>Pinus pinaster</i> (Ait.) stand: sap flow and energy balance with sensible heat flux measurements by an eddy covariance method. Agricultural and Forest Meteorology, 1991, 54, 49-66.	1.9	75
99	Relations entre la microtopographie, les caractéristiques de la couverture morte et la répartition des essences dans une forêt à Bouleau jaune. Canadian Journal of Forest Research, 1988, 18, 1196-1202.	0.8	11