

Sebastiaan Luyssaert

List of Publications by Citations

Source: <https://exaly.com/author-pdf/7717644/sebastiaan-luyssaert-publications-by-citations.pdf>
Version: 2024-04-10

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.
The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

124 papers	14,690 citations	49 h-index	121 g-index
167 ext. papers	16,932 ext. citations	11.1 avg, IF	5.91 L-index

#	Paper	IF	Citations
124	Terrestrial gross carbon dioxide uptake: global distribution and covariation with climate. <i>Science</i> , 2010 , 329, 834-8	33.3	1638
123	Old-growth forests as global carbon sinks. <i>Nature</i> , 2008 , 455, 213-5	50.4	1110
122	Reduction of forest soil respiration in response to nitrogen deposition. <i>Nature Geoscience</i> , 2010 , 3, 315-323	18.3	988
121	Net carbon dioxide losses of northern ecosystems in response to autumn warming. <i>Nature</i> , 2008 , 451, 49-52	50.4	759
120	CO2 balance of boreal, temperate, and tropical forests derived from a global database. <i>Global Change Biology</i> , 2007 , 13, 2509-2537	11.4	744
119	Anthropogenic perturbation of the carbon fluxes from land to ocean. <i>Nature Geoscience</i> , 2013 , 6, 597-607	18.3	695
118	Influence of spring and autumn phenological transitions on forest ecosystem productivity. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2010 , 365, 3227-46	5.8	594
117	Contrasting response of European forest and grassland energy exchange to heatwaves. <i>Nature Geoscience</i> , 2010 , 3, 722-727	18.3	380
116	Land management and land-cover change have impacts of similar magnitude on surface temperature. <i>Nature Climate Change</i> , 2014 , 4, 389-393	21.4	304
115	Importance of methane and nitrous oxide for Europe's terrestrial greenhouse-gas balance. <i>Nature Geoscience</i> , 2009 , 2, 842-850	18.3	272
114	Nutrient availability as the key regulator of global forest carbon balance. <i>Nature Climate Change</i> , 2014 , 4, 471-476	21.4	269
113	Unexpectedly large impact of forest management and grazing on global vegetation biomass. <i>Nature</i> , 2018 , 553, 73-76	50.4	254
112	Europe's forest management did not mitigate climate warming. <i>Science</i> , 2016 , 351, 597-600	33.3	232
111	Carbon accumulation in European forests. <i>Nature Geoscience</i> , 2008 , 1, 425-429	18.3	227
110	Large-scale bioenergy from additional harvest of forest biomass is neither sustainable nor greenhouse gas neutral. <i>GCB Bioenergy</i> , 2012 , 4, 611-616	5.6	218
109	Carbon sequestration: managing forests in uncertain times. <i>Nature</i> , 2014 , 506, 153-5	50.4	213
108	Fertile forests produce biomass more efficiently. <i>Ecology Letters</i> , 2012 , 15, 520-6	10	211

107	Biophysical considerations in forestry for climate protection. <i>Frontiers in Ecology and the Environment</i> , 2011 , 9, 174-182	5.5	209
106	The European carbon balance. Part 3: forests. <i>Global Change Biology</i> , 2010 , 16, 1429-1450	11.4	206
105	Assimilation exceeds respiration sensitivity to drought: A FLUXNET synthesis. <i>Global Change Biology</i> , 2010 , 16, 657-670	11.4	203
104	Presentation and Evaluation of the IPSL-CM6A-LR Climate Model. <i>Journal of Advances in Modeling Earth Systems</i> , 2020 , 12, e2019MS002010	7.1	188
103	Phytoremediation prospects of willow stands on contaminated sediment: a field trial. <i>Environmental Pollution</i> , 2003 , 126, 275-82	9.3	173
102	The European carbon balance. Part 2: croplands. <i>Global Change Biology</i> , 2010 , 16, 1409-1428	11.4	165
101	Regional carbon dioxide implications of forest bioenergy production. <i>Nature Climate Change</i> , 2011 , 1, 419-423	21.4	152
100	The European carbon balance. Part 4: integration of carbon and other trace-gas fluxes. <i>Global Change Biology</i> , 2010 , 16, 1451-1469	11.4	138
99	Forest annual carbon cost: a global-scale analysis of autotrophic respiration. <i>Ecology</i> , 2010 , 91, 652-61	4.6	137
98	Current systematic carbon-cycle observations and the need for implementing a policy-relevant carbon observing system. <i>Biogeosciences</i> , 2014 , 11, 3547-3602	4.6	136
97	Metal uptake by young trees from dredged brackish sediment: limitations and possibilities for phytoextraction and phytostabilisation. <i>Science of the Total Environment</i> , 2004 , 326, 209-15	10.2	120
96	Reconstructing European forest management from 1600 to 2010. <i>Biogeosciences</i> , 2015 , 12, 4291-4316	4.6	108
95	Use and abuse of trace metal concentrations in plant tissue for biomonitoring and phytoextraction. <i>Environmental Pollution</i> , 2005 , 138, 1-4	9.3	104
94	Land management: data availability and process understanding for global change studies. <i>Global Change Biology</i> , 2017 , 23, 512-533	11.4	99
93	Trade-offs in using European forests to meet climate objectives. <i>Nature</i> , 2018 , 562, 259-262	50.4	98
92	Latitudinal patterns of magnitude and interannual variability in net ecosystem exchange regulated by biological and environmental variables. <i>Global Change Biology</i> , 2009 , 15, 2905-2920	11.4	84
91	Biomass production efficiency controlled by management in temperate and boreal ecosystems. <i>Nature Geoscience</i> , 2015 , 8, 843-846	18.3	79
90	Steeper declines in forest photosynthesis than respiration explain age-driven decreases in forest growth. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014 , 111, 8856-8860	11.5	79

89	Reconstruction and attribution of the carbon sink of European forests between 1950 and 2000. <i>Global Change Biology</i> , 2011 , 17, 3274-3292	11.4	79
88	Linking variability in soil solution dissolved organic carbon to climate, soil type, and vegetation type. <i>Global Biogeochemical Cycles</i> , 2014 , 28, 497-509	5.9	69
87	Assessing the ability of three land ecosystem models to simulate gross carbon uptake of forests from boreal to Mediterranean climate in Europe. <i>Biogeosciences</i> , 2007 , 4, 647-656	4.6	65
86	Evaluating the convergence between eddy-covariance and biometric methods for assessing carbon budgets of forests. <i>Nature Communications</i> , 2016 , 7, 13717	17.4	64
85	Can we reconcile atmospheric estimates of the Northern terrestrial carbon sink with land-based accounting?. <i>Current Opinion in Environmental Sustainability</i> , 2010 , 2, 225-230	7.2	63
84	Models meet data: Challenges and opportunities in implementing land management in Earth system models. <i>Global Change Biology</i> , 2018 , 24, 1470-1487	11.4	63
83	Acceptance of sticks, carrots and sermons as policy instruments for directing private forest management. <i>Forest Policy and Economics</i> , 2006 , 9, 285-296	3.6	60
82	Photosynthesis drives anomalies in net carbon-exchange of pine forests at different latitudes. <i>Global Change Biology</i> , 2007 , 13, 2110-2127	11.4	59
81	A vertically discretised canopy description for ORCHIDEE (SVN r2290) and the modifications to the energy, water and carbon fluxes. <i>Geoscientific Model Development</i> , 2015 , 8, 2035-2065	6.3	57
80	Current European policies are unlikely to jointly foster carbon sequestration and protect biodiversity. <i>Biological Conservation</i> , 2016 , 201, 370-376	6.2	51
79	Toward a consistency cross-check of eddy covariance flux-based and biometric estimates of ecosystem carbon balance. <i>Global Biogeochemical Cycles</i> , 2009 , 23, n/a-n/a	5.9	51
78	Comparison of throughfall and soil solution chemistry between a high-density Corsican pine stand and a naturally regenerated silver birch stand. <i>Environmental Pollution</i> , 2004 , 131, 93-105	9.3	49
77	A model of wind-influenced leaf litterfall in a mixed hardwood forest. <i>Canadian Journal of Forest Research</i> , 2003 , 33, 201-209	1.9	47
76	The importance of dissolved organic carbon fluxes for the carbon balance of a temperate Scots pine forest. <i>Agricultural and Forest Meteorology</i> , 2011 , 151, 270-278	5.8	46
75	Cd and Zn concentrations in small mammals and willow leaves on disposal facilities for dredged material. <i>Environmental Pollution</i> , 2001 , 115, 17-22	9.3	46
74	Quantifying land use and disturbance intensity in forestry, based on the self-thinning relationship 2011 , 21, 3272-3284		45
73	Spatial variability and controls over biomass stocks, carbon fluxes, and resource-use efficiencies across forest ecosystems. <i>Trees - Structure and Function</i> , 2014 , 28, 597-611	2.6	44
72	The European land and inland water CO ₂ , CO, CH ₄ and N ₂ O balance between 2001 and 2005. <i>Biogeosciences</i> , 2012 , 9, 3357-3380	4.6	42

71	Soil [N] modulates soil C cycling in CO ₂ -fumigated tree stands: a meta-analysis. <i>Plant, Cell and Environment</i> , 2010 , 33, 2001-11	8.4	41
70	Earthworm biomass and species diversity in windthrow sites of a temperate lowland forest. <i>Pedobiologia</i> , 2002 , 46, 440-451	1.7	41
69	A multi-layer land surface energy budget model for implicit coupling with global atmospheric simulations. <i>Geoscientific Model Development</i> , 2016 , 9, 223-245	6.3	41
68	Interactive effects of environmental change and management strategies on regional forest carbon emissions. <i>Environmental Science & Technology</i> , 2013 , 47, 13132-40	10.3	39
67	The greenhouse gas balance of European grasslands		39
66	New insights in the capability of climate models to simulate the impact of LUC based on temperature decomposition of paired site observations. <i>Journal of Geophysical Research D: Atmospheres</i> , 2015 , 120, 5417-5436	4.4	36
65	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	6.3	36
64	A spatially explicit database of wind disturbances in European forests over the period 2000-2018. <i>Earth System Science Data</i> , 2020 , 12, 257-276	10.5	30
63	Empirical estimates of regional carbon budgets imply reduced global soil heterotrophic respiration. <i>National Science Review</i> , 2021 , 8, nwaa145	10.8	30
62	Acidification of forested podzols in North Belgium during the period 1950-2000. <i>Science of the Total Environment</i> , 2006 , 361, 189-95	10.2	29
61	ORCHIDEE-SOM: modeling soil organic carbon (SOC) and dissolved organic carbon (DOC) dynamics along vertical soil profiles in Europe. <i>Geoscientific Model Development</i> , 2018 , 11, 937-957	6.3	28
60	Forest groups as support to private forest owners in developing close-to-nature management. <i>Forest Policy and Economics</i> , 2005 , 7, 589-601	3.6	26
59	Dredged sediment as a substrate for biomass production of willow trees established using the SALIMAT technique. <i>Biomass and Bioenergy</i> , 2001 , 21, 81-90	5.3	26
58	Sustaining the sequestration efficiency of the European forest sector. <i>Forest Ecology and Management</i> , 2017 , 405, 44-55	3.9	25
57	Assessing and improving the representativeness of monitoring networks: The European flux tower network example. <i>Journal of Geophysical Research</i> , 2011 , 116,		24
56	Accounting for carbon and nitrogen interactions in the global terrestrial ecosystem model ORCHIDEE (trunk version, rev 4999): multi-scale evaluation of gross primary production. <i>Geoscientific Model Development</i> , 2019 , 12, 4751-4779	6.3	24
55	Representing anthropogenic gross land use change, wood harvest, and forest age dynamics in a global vegetation model ORCHIDEE-MICT v8.4.2. <i>Geoscientific Model Development</i> , 2018 , 11, 409-428	6.3	23
54	Different response of surface temperature and air temperature to deforestation in climate models. <i>Earth System Dynamics</i> , 2019 , 10, 473-484	4.8	22

53	Forest summer albedo is sensitive to species and thinning: how should we account for this in Earth system models?. <i>Biogeosciences</i> , 2014 , 11, 2411-2427	4.6	22
52	Sampling procedure for the foliar analysis of deciduous trees. <i>Journal of Environmental Monitoring</i> , 2002 , 4, 858-64		21
51	Disentangling competitive vs. climatic drivers of tropical forest mortality. <i>Journal of Ecology</i> , 2018 , 106, 1165-1179	6	20
50	Response: complexities of sustainable forest use. <i>GCB Bioenergy</i> , 2013 , 5, 1-2	5.6	18
49	Thinning effects on forest productivity: consequences of preserving old forests and mitigating impacts of fire and drought. <i>Plant Ecology and Diversity</i> , 2013 , 6, 73-85	2.2	18
48	Evaluation of forest nutrition based on large-scale foliar surveys: are nutrition profiles the way of the future?. <i>Journal of Environmental Monitoring</i> , 2004 , 6, 160-7		18
47	Does the commonly used estimator of nutrient resorption in tree foliage actually measure what it claims to?. <i>Oecologia</i> , 2005 , 144, 177-86	2.9	18
46	Bio-energy retains its mitigation potential under elevated CO ₂ . <i>PLoS ONE</i> , 2010 , 5, e11648	3.7	16
45	Modeling the effects of varying data quality on trend detection in environmental monitoring. <i>Ecological Informatics</i> , 2007 , 2, 167-176	4.2	15
44	Temperate and Boreal Old-Growth Forests: How do Their Growth Dynamics and Biodiversity Differ from Young Stands and Managed Forests?. <i>Ecological Studies</i> , 2009 , 343-366	1.1	15
43	Trends in soil solution dissolved organic carbon (DOC) concentrations across European forests. <i>Biogeosciences</i> , 2016 , 13, 5567-5585	4.6	15
42	Reconstructing Taiwan's land cover changes between 1904 and 2015 from historical maps and satellite images. <i>Scientific Reports</i> , 2019 , 9, 3643	4.9	13
41	Simulating boreal forest carbon dynamics after stand-replacing fire disturbance: insights from a global process-based vegetation model. <i>Biogeosciences</i> , 2013 , 10, 8233-8252	4.6	11
40	Potential knowledge gain in large-scale simulations of forest carbon fluxes from remotely sensed biomass and height. <i>Forest Ecology and Management</i> , 2011 , 261, 515-530	3.9	11
39	Are N and S deposition altering the mineral composition of Norway spruce and Scots pine needles in Finland?. <i>Environmental Pollution</i> , 2005 , 138, 5-17	9.3	11
38	Simulating damage for wind storms in the land surface model ORCHIDEE-CAN (revision 4262). <i>Geoscientific Model Development</i> , 2018 , 11, 771-791	6.3	11
37	Fire regimes and variability in aboveground woody biomass in miombo woodland. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2014 , 119, 1014-1029	3.7	10
36	Current systematic carbon cycle observations and needs for implementing a policy-relevant carbon observing system		10

35	Modelled land use and land cover change emissions in a spatio-temporal comparison of different approaches. <i>Earth System Dynamics</i> , 2021 , 12, 635-670	4.8	10
34	Assimilating satellite-based canopy height within an ecosystem model to estimate aboveground forest biomass. <i>Geophysical Research Letters</i> , 2017 , 44, 6823-6832	4.9	9
33	Preliminary results of afforestation of brackish sludge mounds. <i>Ecological Engineering</i> , 2001 , 16, 567-572	3.9	9
32	Cadmium variability in leaves of a <i>Salix fragilis</i> : simulation and implications for leaf sampling. <i>Canadian Journal of Forest Research</i> , 2001 , 31, 313-321	1.9	9
31	Cadmium variability in leaves of a <i>Salix fragilis</i> : simulation and implications for leaf sampling. <i>Canadian Journal of Forest Research</i> , 2001 , 31, 313-321	1.9	9
30	Carbon costs and benefits of France's biomass energy production targets. <i>Carbon Balance and Management</i> , 2018 , 13, 26	3.6	9
29	A multi-level canopy radiative transfer scheme for ORCHIDEE (SVN r2566), based on a domain-averaged structure factor		8
28	Drought resistance increases from the individual to the ecosystem level in highly diverse Neotropical rainforest: a meta-analysis of leaf, tree and ecosystem responses to drought. <i>Biogeosciences</i> , 2020 , 17, 2621-2645	4.6	7
27	Reconstructing European forest management from 1600 to 2010		7
26	A triple tree-ring constraint for tree growth and physiology in a global land surface model. <i>Biogeosciences</i> , 2021 , 18, 3781-3803	4.6	7
25	The European carbon balance. Part 4: integration of carbon and other trace-gas fluxes. <i>Global Change Biology</i> , 2009 , 16, 2399-2399	11.4	5
24	A vertically discretised canopy description for ORCHIDEE (SVN r2290) and the modifications to the energy, water and carbon fluxes		5
23	A multi-layer land surface energy budget model for implicit coupling with global atmospheric simulations		5
22	Representing anthropogenic gross land use change, wood harvest and forest age dynamics in a global vegetation model ORCHIDEE-MICT (r4259) 2017 ,		4
21	ORCHIDEE-SRC v1.0: an extension of the land surface model ORCHIDEE for simulating short rotation coppice poplar plantations. <i>Geoscientific Model Development</i> , 2015 , 8, 1461-1471	6.3	4
20	Simulating boreal forest carbon dynamics after stand-replacing fire disturbance: insights from a global process-based vegetation model		4
19	Different response of surface temperature and air temperature to deforestation in climate models		4
18	Drought effects on leaf fall, leaf flushing and stem growth in the Amazon forest: reconciling remote sensing data and field observations. <i>Biogeosciences</i> , 2021 , 18, 4445-4472	4.6	4

- 17 Reply to: Old-growth forest carbon sinks overestimated. *Nature*, **2021**, 591, E24-E25 50.4 3
- 16 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^{21.4} 2
- 15 Forests in flux as climate varies. *Nature*, **2018**, 556, 35-37 50.4 2
- 14 Forest annual carbon cost: reply. *Ecology*, **2011**, 92, 1998-2002 4.6 2
- 13 Support, shape and number of replicate samples for tree foliage analysis. *Journal of Environmental Monitoring*, **2003**, 5, 500-4 2
- 12 Should foliar cadmium concentrations be expressed on a dry weight or dry ash weight basis? *Journal of Environmental Monitoring*, **2002**, 4, 408-12 2
- 11 The European CO₂, CO, CH₄ and N₂O balance between 2001 and 2005 2
- 10 Accounting for Carbon and Nitrogen interactions in the Global Terrestrial Ecosystem Model ORCHIDEE (trunk version, rev 4999): multi-scale evaluation of gross primary production **2018**, 2
- 9 Effect of tree demography and flexible root water uptake for modeling the carbon and water cycles of Amazonia. *Ecological Modelling*, **2022**, 469, 109969 3 2
- 8 ORCHIDEE-SOM: Modeling soil organic carbon (SOC) and dissolved organic carbon (DOC) dynamics along vertical soil profiles in Europe **2017**, 1
- 7 Can land use intensity be reliably quantified by using a single self-thinning relationship? Reply to Schall and Ammer **2013**, 23, 677-8 1
- 6 Summertime canopy albedo is sensitive to forest thinning 1
- 5 Using the International Tree-Ring Data Bank (ITRDB) records as century-long benchmarks for land-surface models 1
- 4 Using the International Tree-Ring Data Bank (ITRDB) records as century-long benchmarks for global land-surface models. *Geoscientific Model Development*, **2021**, 14, 5891-5913 6.3 0
- 3 Response to 'The European nitrogen cycle: response to Schulze et al, Global Change Biology (2010) 16, pp. 1451-1469'. *Global Change Biology*, **2011**, 17, 2758-2761 11.4
- 2 Comment on "In defense of plants as biomonitors of soil quality". *Environmental Pollution*, **2006**, 144, 715 9.3
- 1 Bottom-up approaches for estimating terrestrial GHG budgets: Bookkeeping, process-based modeling, and data-driven methods **2022**, 59-85