

Annalea Lohila

List of Publications by Year in descending order

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Version: 2024-02-01

106
papers

9,234
citations

93792

39
h-index

49824

91
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174
all docs

174
docs citations

174
times ranked

10872
citing authors

#	ARTICLE	IF	CITATIONS
1	Stable carbon isotope signatures of methane from a Finnish subarctic wetland. <i>Tellus, Series B: Chemical and Physical Meteorology</i> , 2022, 64, 18818.	0.8	31
2	Methane budget estimates in Finland from the CarbonTracker Europe-CH ₄ data assimilation system. <i>Tellus, Series B: Chemical and Physical Meteorology</i> , 2022, 71, 1565030.	0.8	11
3	The ABCflux database: Arctic boreal CO ₂ flux observations and ancillary information aggregated to monthly time steps across terrestrial ecosystems. <i>Earth System Science Data</i> , 2022, 14, 179-208.	3.7	22
4	Global maps of soil temperature. <i>Global Change Biology</i> , 2022, 28, 3110-3144.	4.2	113
5	Towards agricultural soil carbon monitoring, reporting, and verification through the Field Observatory Network (FION). <i>Geoscientific Instrumentation, Methods and Data Systems</i> , 2022, 11, 93-109.	0.6	8
6	Identifying main uncertainties in estimating past and present radiative forcing of peatlands. <i>Global Change Biology</i> , 2022, 28, 4069-4084.	4.2	5
7	Assessing methane emissions for northern peatlands in ORCHIDEE-PEAT revision 7020. <i>Geoscientific Model Development</i> , 2022, 15, 2813-2838.	1.3	8
8	Excess soil moisture and fresh carbon input are prerequisites for methane production in podzolic soil. <i>Biogeosciences</i> , 2022, 19, 2025-2041.	1.3	1
9	Measurement report: Atmospheric new particle formation in a coastal agricultural site explained with binPMF analysis of nitrate CI-API-TOF spectra. <i>Atmospheric Chemistry and Physics</i> , 2022, 22, 8097-8115.	1.9	8
10	Expert assessment of future vulnerability of the global peatland carbon sink. <i>Nature Climate Change</i> , 2021, 11, 70-77.	8.1	167
11	Upscaling Northern Peatland CO ₂ Fluxes Using Satellite Remote Sensing Data. <i>Remote Sensing</i> , 2021, 13, 818.	1.8	19
12	Predicting catchment-scale methane fluxes with multi-source remote sensing. <i>Landscape Ecology</i> , 2021, 36, 1177-1195.	1.9	19
13	Carbon dioxide and methane exchange of a patterned subarctic fen during two contrasting growing seasons. <i>Biogeosciences</i> , 2021, 18, 873-896.	1.3	15
14	Quantifying groundwater fluxes from an aapa mire to a riverside esker formation. <i>Hydrology Research</i> , 2021, 52, 585-596.	1.1	2
15	Substantial hysteresis in emergent temperature sensitivity of global wetland CH ₄ emissions. <i>Nature Communications</i> , 2021, 12, 2266.	5.8	34
16	Identifying dominant environmental predictors of freshwater wetland methane fluxes across diurnal to seasonal time scales. <i>Global Change Biology</i> , 2021, 27, 3582-3604.	4.2	59
17	Methane production and oxidation potentials along a fen bog gradient from southern boreal to subarctic peatlands in Finland. <i>Global Change Biology</i> , 2021, 27, 4449-4464.	4.2	17
18	Carbon dioxide fluxes and carbon balance of an agricultural grassland in southern Finland. <i>Biogeosciences</i> , 2021, 18, 3467-3483.	1.3	14

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19	Warming climate forcing impact from a sub-arctic peatland as a result of late Holocene permafrost aggradation and initiation of bare peat surfaces. <i>Quaternary Science Reviews</i> , 2021, 264, 107022.	1.4	3
20	FLUXNET-CH ₄ : a global, multi-ecosystem dataset and analysis of methane seasonality from freshwater wetlands. <i>Earth System Science Data</i> , 2021, 13, 3607-3689.	3.7	79
21	Subarctic catchment water storage and carbon cycling – Leading the way for future studies using integrated datasets at Pallas, Finland. <i>Hydrological Processes</i> , 2021, 35, e14350.	1.1	10
22	Mosses are Important for Soil Carbon Sequestration in Forested Peatlands. <i>Frontiers in Environmental Science</i> , 2021, 9, .	1.5	9
23	Gap-filling eddy covariance methane fluxes: Comparison of machine learning model predictions and uncertainties at FLUXNET-CH ₄ wetlands. <i>Agricultural and Forest Meteorology</i> , 2021, 308-309, 108528.	1.9	33
24	Refining the role of phenology in regulating gross ecosystem productivity across European peatlands. <i>Global Change Biology</i> , 2020, 26, 876-887.	4.2	25
25	Detecting northern peatland vegetation patterns at ultra-high spatial resolution. <i>Remote Sensing in Ecology and Conservation</i> , 2020, 6, 457-471.	2.2	27
26	The FLUXNET2015 dataset and the ONEFlux processing pipeline for eddy covariance data. <i>Scientific Data</i> , 2020, 7, 225.	2.4	646
27	Effects of drought and meteorological forcing on carbon and water fluxes in Nordic forests during the dry summer of 2018. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2020, 375, 20190516.	1.8	35
28	Impact of partial harvest on CH ₄ and N ₂ O balances of a drained boreal peatland forest. <i>Agricultural and Forest Meteorology</i> , 2020, 295, 108168.	1.9	18
29	Vegetation controls of water and energy balance of a drained peatland forest: Responses to alternative harvesting practices. <i>Agricultural and Forest Meteorology</i> , 2020, 295, 108198.	1.9	31
30	Satellite Determination of Peatland Water Table Temporal Dynamics by Localizing Representative Pixels of A SWIR-Based Moisture Index. <i>Remote Sensing</i> , 2020, 12, 2936.	1.8	16
31	Modeled Microbial Dynamics Explain the Apparent Temperature Sensitivity of Wetland Methane Emissions. <i>Global Biogeochemical Cycles</i> , 2020, 34, e2020GB006678.	1.9	34
32	Effect of the 2018 European drought on methane and carbon dioxide exchange of northern mire ecosystems. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2020, 375, 20190517.	1.8	34
33	Increasing contribution of peatlands to boreal evapotranspiration in a warming climate. <i>Nature Climate Change</i> , 2020, 10, 555-560.	8.1	106
34	Stomatal response to decreased relative humidity constrains the acceleration of terrestrial evapotranspiration. <i>Environmental Research Letters</i> , 2020, 15, 094066.	2.2	18
35	Sesquiterpenes dominate monoterpenes in northern wetland emissions. <i>Atmospheric Chemistry and Physics</i> , 2020, 20, 7021-7034.	1.9	18
36	Decreased carbon accumulation feedback driven by climate-induced drying of two southern boreal bogs over recent centuries. <i>Global Change Biology</i> , 2020, 26, 2435-2448.	4.2	40

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37	A Microbial Functional Group-Based CH ₄ Model Integrated Into a Terrestrial Ecosystem Model: Model Structure, Site-Level Evaluation, and Sensitivity Analysis. <i>Journal of Advances in Modeling Earth Systems</i> , 2020, 12, e2019MS001867.	1.3	7
38	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
39	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
40	The biophysical climate mitigation potential of boreal peatlands during the growing season. <i>Environmental Research Letters</i> , 2020, 15, 104004.	2.2	31
41	Water flow controls the spatial variability of methane emissions in a northern valley fen ecosystem. <i>Biogeosciences</i> , 2020, 17, 6247-6270.	1.3	10
42	PEAT-CLSM: A Specific Treatment of Peatland Hydrology in the NASA Catchment Land Surface Model. <i>Journal of Advances in Modeling Earth Systems</i> , 2019, 11, 2130-2162.	1.3	40
43	Parameter calibration and stomatal conductance formulation comparison for boreal forests with adaptive population importance sampler in the land surface model JSBACH. <i>Geoscientific Model Development</i> , 2019, 12, 4075-4098.	1.3	10
44	Ecosystem carbon response of an Arctic peatland to simulated permafrost thaw. <i>Global Change Biology</i> , 2019, 25, 1746-1764.	4.2	52
45	Memory effects of climate and vegetation affecting net ecosystem CO ₂ fluxes in global forests. <i>PLoS ONE</i> , 2019, 14, e0211510.	1.1	58
46	Reviews and syntheses: Greenhouse gas exchange data from drained organic forest soils – a review of current approaches and recommendations for future research. <i>Biogeosciences</i> , 2019, 16, 4687-4703.	1.3	13
47	Greenhouse gas and energy fluxes in a boreal peatland forest after clear-cutting. <i>Biogeosciences</i> , 2019, 16, 3703-3723.	1.3	39
48	Monthly gridded data product of northern wetland methane emissions based on upscaling eddy covariance observations. <i>Earth System Science Data</i> , 2019, 11, 1263-1289.	3.7	69
49	Nitrogen-rich organic soils under warm well-drained conditions are global nitrous oxide emission hotspots. <i>Nature Communications</i> , 2018, 9, 1135.	5.8	98
50	Retrieval of daily gross primary production over Europe and Africa from an ensemble of SEVIRI/MSG products. <i>International Journal of Applied Earth Observation and Geoinformation</i> , 2018, 65, 124-136.	1.4	8
51	Standardisation of chamber technique for CO ₂ , N ₂ O and CH ₄ fluxes measurements from terrestrial ecosystems. <i>International Agrophysics</i> , 2018, 32, 569-587.	0.7	76
52	Persistent carbon sink at a boreal drained bog forest. <i>Biogeosciences</i> , 2018, 15, 3603-3624.	1.3	47
53	Could continuous cover forestry be an economically and environmentally feasible management option on drained boreal peatlands?. <i>Forest Ecology and Management</i> , 2018, 424, 78-84.	1.4	57
54	Towards long-term standardised carbon and greenhouse gas observations for monitoring Europe's terrestrial ecosystems: a review. <i>International Agrophysics</i> , 2018, 32, 439-455.	0.7	55

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55	Standardisation of eddy-covariance flux measurements of methane and nitrous oxide. <i>International Agrophysics</i> , 2018, 32, 517-549.	0.7	66
56	Ancillary vegetation measurements at ICOS ecosystem stations. <i>International Agrophysics</i> , 2018, 32, 645-664.	0.7	35
57	Measurement of the $\delta^{13}\text{C}$ isotopic signature of methane emissions from northern European wetlands. <i>Global Biogeochemical Cycles</i> , 2017, 31, 605-623.	1.9	52
58	Lateral expansion and carbon exchange of a boreal peatland in Finland resulting in 7000 years of positive radiative forcing. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2017, 122, 562-577.	1.3	31
59	Elemental Composition of Natural Nanoparticles and Fine Colloids in European Forest Stream Waters and Their Role as Phosphorus Carriers. <i>Global Biogeochemical Cycles</i> , 2017, 31, 1592-1607.	1.9	48
60	Methane exchange at the peatland forest floor "automatic chamber system exposes the dynamics of small fluxes. <i>Biogeosciences</i> , 2017, 14, 1947-1967.	1.3	24
61	Modelling sun-induced fluorescence and photosynthesis with a land surface model at local and regional scales in northern Europe. <i>Biogeosciences</i> , 2017, 14, 1969-1987.	1.3	40
62	HIMMELI v1.0: Helsinki Model of METHane buiLd-up and emISSION for peatlands. <i>Geoscientific Model Development</i> , 2017, 10, 4665-4691.	1.3	24
63	Growing season CH_4 and N_2O fluxes from a subarctic landscape in northern Finland; from chamber to landscape scale. <i>Biogeosciences</i> , 2017, 14, 799-815.	1.3	22
64	Assessing various drought indicators in representing summer drought in boreal forests in Finland. <i>Hydrology and Earth System Sciences</i> , 2016, 20, 175-191.	1.9	36
65	Importance of vegetation classes in modeling CH_4 emissions from boreal and subarctic wetlands in Finland. <i>Science of the Total Environment</i> , 2016, 572, 1111-1122.	3.9	23
66	Calibration and validation of a semi-empirical flux ecosystem model for coniferous forests in the Boreal region. <i>Ecological Modelling</i> , 2016, 341, 37-52.	1.2	39
67	Do the energy fluxes and surface conductance of boreal coniferous forests in Europe scale with leaf area?. <i>Global Change Biology</i> , 2016, 22, 4096-4113.	4.2	39
68	Response of boreal lakes to episodic weather-induced events. <i>Inland Waters</i> , 2016, 6, 523-534.	1.1	21
69	Large contribution of boreal upland forest soils to a catchment-scale CH_4 balance in a wet year. <i>Geophysical Research Letters</i> , 2016, 43, 2946-2953.	1.5	41
70	A simple CO_2 exchange model simulates the seasonal leaf area development of peatland sedges. <i>Ecological Modelling</i> , 2015, 314, 32-43.	1.2	10
71	CO_2 fluxes and ecosystem dynamics at five European treeless peatlands "merging data and process oriented modeling. <i>Biogeosciences</i> , 2015, 12, 125-146.	1.3	27
72	The uncertain climate footprint of wetlands under human pressure. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 4594-4599.	3.3	171

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73	Studying the impact of living roots on the decomposition of soil organic matter in two different forestry-drained peatlands. <i>Plant and Soil</i> , 2015, 396, 59-72.	1.8	17
74	Nitrous oxide emission budgets and land-use-driven hotspots for organic soils in Europe. <i>Biogeosciences</i> , 2014, 11, 6595-6612.	1.3	68
75	Measurements of CO ₂ exchange with an automated chamber system throughout the year: challenges in measuring night-time respiration on porous peat soil. <i>Biogeosciences</i> , 2014, 11, 347-363.	1.3	54
76	Simulation of CO ₂ and Attribution Analysis at Six European Peatland Sites Using the ECOSSE Model. <i>Water, Air, and Soil Pollution</i> , 2014, 225, 1.	1.1	21
77	Development, carbon accumulation, and radiative forcing of a subarctic fen over the Holocene. <i>Holocene</i> , 2014, 24, 1156-1166.	0.9	26
78	Methane and carbon dioxide fluxes and their regional scalability for the European Arctic wetlands during the MAMM project in summer 2012. <i>Atmospheric Chemistry and Physics</i> , 2014, 14, 13159-13174.	1.9	39
79	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
80	Latent heat exchange in the boreal and arctic biomes. <i>Global Change Biology</i> , 2014, 20, 3439-3456.	4.2	52
81	Chamber measured soil respiration: A useful tool for estimating the carbon balance of peatland forest soils?. <i>Forest Ecology and Management</i> , 2012, 277, 132-140.	1.4	32
82	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.	1.3	53
83	Greenhouse gas flux measurements in a forestry-drained peatland indicate a large carbon sink. <i>Biogeosciences</i> , 2011, 8, 3203-3218.	1.3	101
84	Responses of N ₂ O fluxes to temperature, water table and N deposition in a northern boreal fen. <i>European Journal of Soil Science</i> , 2010, 61, 651-661.	1.8	65
85	Comparison of greenhouse gas fluxes and nitrogen budgets from an ombrotrophic bog in Scotland and a minerotrophic sedge fen in Finland. <i>European Journal of Soil Science</i> , 2010, 61, 640-650.	1.8	82
86	The European carbon balance. Part 4: integration of carbon and other trace-gas fluxes. <i>Global Change Biology</i> , 2010, 16, 1451-1469.	4.2	157
87	Greenhouse gas fluxes in a drained peatland forest during spring frost-thaw event. <i>Biogeosciences</i> , 2010, 7, 1715-1727.	1.3	39
88	Forestation of boreal peatlands: Impacts of changing albedo and greenhouse gas fluxes on radiative forcing. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	64
89	The European carbon balance. Part 4: integration of carbon and other trace-gas fluxes. <i>Global Change Biology</i> , 2009, 16, 2399-2399.	4.2	5
90	Biosphere-atmosphere exchange of reactive nitrogen and greenhouse gases at the NitroEurope core flux measurement sites: Measurement strategy and first data sets. <i>Agriculture, Ecosystems and Environment</i> , 2009, 133, 139-149.	2.5	104

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91	Influences of changing land use and CO ₂ concentration on ecosystem and landscape level carbon and water balances in mountainous terrain of the Stubai Valley, Austria. <i>Global and Planetary Change</i> , 2009, 67, 29-43.	1.6	27
92	Micrometeorological Measurements of Methane and Carbon Dioxide Fluxes at a Municipal Landfill. <i>Environmental Science & Technology</i> , 2007, 41, 2717-2722.	4.6	82
93	Linking flux network measurements to continental scale simulations: ecosystem carbon dioxide exchange capacity under non-water-stressed conditions. <i>Global Change Biology</i> , 2007, 13, 734-760.	4.2	81
94	Wintertime CO ₂ exchange in a boreal agricultural peat soil. <i>Tellus, Series B: Chemical and Physical Meteorology</i> , 2007, 59, 860-873.	0.8	15
95	Partitioning European grassland net ecosystem CO ₂ exchange into gross primary productivity and ecosystem respiration using light response function analysis. <i>Agriculture, Ecosystems and Environment</i> , 2007, 121, 93-120.	2.5	305
96	Linking flux network measurements to continental scale simulations: ecosystem carbon dioxide exchange capacity under non-water-stressed conditions. <i>Global Change Biology</i> , 2007, .	4.2	0
97	Modeling atmospheric CO ₂ concentration profiles and fluxes above sloping terrain at a boreal site. <i>Atmospheric Chemistry and Physics</i> , 2006, 6, 303-314.	1.9	11
98	PIXGRO: A model for simulating the ecosystem CO ₂ exchange and growth of spring barley. <i>Ecological Modelling</i> , 2006, 190, 260-276.	1.2	33
99	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
100	Nitrous Oxide Emissions from a Municipal Landfill. <i>Environmental Science & Technology</i> , 2005, 39, 7790-7793.	4.6	89
101	Measuring methane emissions from a landfill using a cost-effective micrometeorological method. <i>Geophysical Research Letters</i> , 2005, 32, n/a-n/a.	1.5	36
102	Annual CO ₂ exchange of a peat field growing spring barley or perennial forage grass. <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	100
103	Comparison of different chamber techniques for measuring soil CO ₂ efflux. <i>Agricultural and Forest Meteorology</i> , 2004, 123, 159-176.	1.9	420
104	Soil and total ecosystem respiration in agricultural fields: effect of soil and crop type. <i>Plant and Soil</i> , 2003, 251, 303-317.	1.8	130
105	Methane production and oxidation potentials in relation to water table fluctuations in two boreal mires. <i>Soil Biology and Biochemistry</i> , 1999, 31, 1741-1749.	4.2	158
106	Seasonal variation in CH ₄ emissions and production and oxidation potentials at microsites on an oligotrophic pine fen. <i>Oecologia</i> , 1997, 110, 414-422.	0.9	158