Thomas Friborg

List of Publications by Year
in descending order

65 papers	5,193 citations	101496 36 h-index	102432 66 g-index
93 all docs	93 docs citations	93 times ranked	5970 citing authors

#	Article	IF	Citations
1	A system to measure surface fluxes of momentum, sensible heat, water vapour and carbon dioxide. Journal of Hydrology, 1997, 188-189, 589-611.	2.3	848
2	Thawing sub-arctic permafrost: Effects on vegetation and methane emissions. Geophysical Research Letters, 2004, 31, .	1.5	423
3	Large loss of CO2 in winter observed across the northern permafrost region. Nature Climate Change, 2019, 9, 852-857.	8.1	225
4	Decadal vegetation changes in a northern peatland, greenhouse gas fluxes and net radiative forcing. Global Change Biology, 2006, 12, 2352-2369.	4.2	214
5	The uncertain climate footprint of wetlands under human pressure. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 4594-4599.	3.3	171
6	Siberian wetlands: Where a sink is a source. Geophysical Research Letters, 2003, 30, .	1.5	150
7	Trace gas exchange in a high-Arctic valley: 1. Variationsin CO2and CH4Flux between tundra vegetation types. Global Biogeochemical Cycles, 2000, 14, 701-713.	1.9	143
8	Annual cycle of methane emission from a subarctic peatland. Journal of Geophysical Research, 2010, 115, .	3.3	128
9	Biotic, Abiotic, and Management Controls on the Net Ecosystem CO2 Exchange of European Mountain Grassland Ecosystems. Ecosystems, 2008, 11, 1338-1351.	1.6	122
10	Estimating evaporation with thermal UAV data and two-source energy balance models. Hydrology and Earth System Sciences, 2016, 20, 697-713.	1.9	119
11	Methane emissions from western Siberian wetlands: heterogeneity and sensitivity to climate change. Environmental Research Letters, 2007, 2, 045015.	2.2	110
12	Increasing contribution of peatlands to boreal evapotranspiration in a warming climate. Nature Climate Change, 2020, 10, 555-560.	8.1	106
13	The variability of evaporation during the HAPEX-Sahel Intensive Observation Period. Journal of Hydrology, 1997, 188-189, 385-399.	2.3	96
14	Trace gas exchange in a high-Arctic valley: 3. Integrating and scaling CO2fluxes from canopy to landscape using flux data, footprint modeling, and remote sensing. Global Biogeochemical Cycles, 2000, 14, 725-744.	1.9	93
15	Temperature and snow-melt controls on interannual variability in carbon exchange in the high Arctic. Theoretical and Applied Climatology, 2007, 88, 111-125.	1.3	93
16	Crop water stress maps for an entire growing season from visible and thermal UAV imagery. Biogeosciences, 2016, 13, 6545-6563.	1.3	86
17	Rapid response of greenhouse gas emission to early spring thaw in a subarctic mire as shown by micrometeorological techniques. Geophysical Research Letters, 1997, 24, 3061-3064.	1.5	82
18	A catchment-scale carbon and greenhouse gas budget of a subarctic landscape. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2007, 365, 1643-1656.	1.6	76

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19	Seasonal carbon dioxide balance and respiration of a high-arctic fen ecosystem in NE-Greenland. Theoretical and Applied Climatology, 2001, 70, 149-166.	1.3	73
20	Large methane emissions from a subarctic lake during spring thaw: Mechanisms and landscape significance. Journal of Geophysical Research G: Biogeosciences, 2015, 120, 2289-2305.	1.3	70
21	Monthly gridded data product of northern wetland methane emissions based on upscaling eddy covariance observations. Earth System Science Data, 2019, 11, 1263-1289.	3.7	69
22	Trace gas exchange in a high-Arctic valley: 2. Landscape CH4fluxes measured and modeled using eddy correlation data. Global Biogeochemical Cycles, 2000, 14, 715-723.	1.9	68
23	Observations and Status of Peatland Greenhouse Gas Emissions in Europe. Ecological Studies, 2008, , 243-261.	0.4	68
24	Carbon dioxide balance of subarctic tundra from plot to regional scales. Biogeosciences, 2013, 10, 437-452.	1.3	65
25	Interpreting the variations in atmospheric methane fluxes observed above a restored wetland. Agricultural and Forest Meteorology, 2011, 151, 841-853.	1.9	64
26	Trends in CO₂ exchange in a high Arctic tundra heath, 2000â€“2010. Journal of Geophysical Research, 2012, 117, .	3.3	63
27	BVOC ecosystem flux measurements at a high latitude wetland site. Atmospheric Chemistry and Physics, 2010, 10, 1617-1634.	1.9	62
28	Monitoring the Multi-Year Carbon Balance of a Subarctic Palsa Mire with Micrometeorological Techniques. Ambio, 2012, 41, 207-217.	2.8	60
29	Year-round CH₄ and CO₂ flux dynamics in two contrasting freshwater ecosystems of the subarctic. Biogeosciences, 2017, 14, 5189-5216.	1.3	55
30	Climate and site management as driving factors for the atmospheric greenhouse gas exchange of a restored wetland. Biogeosciences, 2013, 10, 39-52.	1.3	51
31	Climateâ€Sensitive Controls on Large Spring Emissions of CH₄ and CO₂ From Northern Lakes. Journal of Geophysical Research G: Biogeosciences, 2019, 124, 2379-2399.	1.3	50
32	Surface fluxes of heat and water vapour from sites in the European Arctic. Theoretical and Applied Climatology, 2001, 70, 19-33.	1.3	44
33	Spatial and temporal variations in net carbon flux during HAPEX-Sahel. Journal of Hydrology, 1997, 188-189, 563-588.	2.3	43
34	Carbon stocks and fluxes in the high latitudes: using site-level data to evaluate Earth system models. Biogeosciences, 2017, 14, 5143-5169.	1.3	43
35	ORCHIDEE-PEAT (revision 4596), a model for northern peatland CO₂, water, and energy fluxes on daily to annual scales. Geoscientific Model Development, 2018, 11, 497-519.	1.3	43
36	Quantification of C uptake in subarctic birch forest after setback by an extreme insect outbreak. Geophysical Research Letters, 2011, 38, n/a-n/a.	1.5	42

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37	Energy Fluxes above Three Disparate Surfaces in a Temperate Mesoscale Coastal Catchment. Vadose Zone Journal, 2011, 10, 54-66.	1.3	41
38	Arctic Vegetation Damage by Winter-Generated Coal Mining Pollution Released upon Thawing. Environmental Science & Technology, 2007, 41, 2407-2413.	4.6	38
39	Methane dynamics in the subarctic tundra: combining stable isotope analyses, plot- and ecosystem-scale flux measurements. Biogeosciences, 2016, 13, 597-608.	1.3	37
40	Partitioning forest evapotranspiration: Interception evaporation and the impact of canopy structure, local and regional advection. Journal of Hydrology, 2014, 517, 677-690.	2.3	36
41	Plant-mediated CH4 transport and C gas dynamics quantified in-situ in a Phalaris arundinacea-dominant wetland. Plant and Soil, 2011, 343, 287-301.	1.8	35
42	Direct and indirect controls of the interannual variability in atmospheric CO2 exchange of three contrasting ecosystems in Denmark. Agricultural and Forest Meteorology, 2017, 233, 12-31.	1.9	35
43	Modeled Microbial Dynamics Explain the Apparent Temperature Sensitivity of Wetland Methane Emissions. Global Biogeochemical Cycles, 2020, 34, e2020GB006678.	1.9	34
44	Substantial hysteresis in emergent temperature sensitivity of global wetland CH4 emissions. Nature Communications, 2021, 12, 2266.	5.8	34
45	Highâ€Arctic Soil CO2 and CH4 Production Controlled by Temperature, Water, Freezing and Snow. Advances in Ecological Research, 2008, 40, 441-472.	1.4	33
46	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.	1.9	33
47	Surface energy- and water balance in a high-arcticenvironment in NE Greenland. Theoretical and Applied Climatology, 2001, 70, 35-51.	1.3	31
48	The biophysical climate mitigation potential of boreal peatlands during the growing season. Environmental Research Letters, 2020, 15, 104004.	2.2	31
49	Comparing Evapotranspiration Rates Estimated from Atmospheric Flux and TDR Soil Moisture Measurements. Vadose Zone Journal, 2011, 10, 78-83.	1.3	28
50	Volatile organic compound fluxes in a subarctic peatland and lake. Atmospheric Chemistry and Physics, 2020, 20, 13399-13416.	1.9	28
51	UAV-borne, LiDAR-based elevation modelling: a method for improving local-scale urban flood risk assessment. Natural Hazards, 2022, 113, 423-451.	1.6	27
52	Partitioning of forest evapotranspiration: The impact of edge effects and canopy structure. Agricultural and Forest Meteorology, 2012, 166-167, 86-97.	1.9	25
53	Modelling of growing season methane fluxes in a high-Arctic wet tundra ecosystem 1997â€“2010 using in situ and high-resolution satellite data. Tellus, Series B: Chemical and Physical Meteorology, 2013, 65, 19722.	0.8	24
54	Model-data fusion to assess year-round CO2 fluxes for an arctic heath ecosystem in West Greenland (69Â°N). Agricultural and Forest Meteorology, 2019, 272-273, 176-186.	1.9	23

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55	Carbon dioxide flux, transpiration and light response of millet in the Sahel. Journal of Hydrology, 1997, 188-189, 633-650.	2.3	20
56	Assessing the spatial variability in peak season CO₂ exchange characteristics across the Arctic tundra using a light response curve parameterization. Biogeosciences, 2014, 11, 4897-4912.	1.3	20
57	Spatial and Interâ€Annual Variability of Trace Gas Fluxes in a Heterogeneous Highâ€Arctic Landscape. Advances in Ecological Research, 2008, 40, 473-498.	1.4	19
58	Inference of spatial heterogeneity in surface fluxes from eddy covariance data: A case study from a subarctic mire ecosystem. Agricultural and Forest Meteorology, 2020, 280, 107783.	1.9	17
59	Catchmentâ€Wide Atmospheric Greenhouse Gas Exchange as Influenced by Land Use Diversity. Vadose Zone Journal, 2011, 10, 67-77.	1.3	16
60	Models of CO2 and water vapour fluxes from a sparse millet crop in the Sahel. Agricultural and Forest Meteorology, 1999, 93, 7-26.	1.9	14
61	Explicitly modelling microtopography in permafrost landscapes in a land surface model (JULES) Tj ETQq1 1 0.784314 rgBT /Overlock 1	1.3	6
62	Deriving Aerodynamic Roughness Length at Ultra-High Resolution in Agricultural Areas Using UAV-Borne LiDAR. Remote Sensing, 2021, 13, 3538.	1.8	5
63	Field-scale CH₄ emission at a subarctic mire with heterogeneous permafrost thaw status. Biogeosciences, 2021, 18, 5811-5830.	1.3	5
64	Modeling Canopy CO₂ Exchange in the European Russian Arctic. Arctic, Antarctic, and Alpine Research, 2013, 45, 50-63.	0.4	4
65	Controls on the greenhouse gas exchange of a high-arctic ecosystem. Geografisk Tidsskrift, 1999, 99, 19-26.	0.4	1