E S Euskirchen

List of Publications by Year
in descending order

92 papers	10,793 citations	57631 44 h-index	43802 91 g-index
138 all docs	138 docs citations	138 times ranked	12466 citing authors

#	Article	IF	Citations
1	Vulnerability of Permafrost Carbon to Climate Change: Implications for the Global Carbon Cycle. BioScience, 2008, 58, 701-714.	2.2	1,379
2	Role of Land-Surface Changes in Arctic Summer Warming. Science, 2005, 310, 657-660.	6.0	1,186
3	Edge Influence on Forest Structure and Composition in Fragmented Landscapes. Conservation Biology, 2005, 19, 768-782.	2.4	985
4	Carbon cycling and storage in world forests: biome patterns related to forest age. Global Change Biology, 2004, 10, 2052-2077.	4.2	756
5	Temperature and vegetation seasonality diminishment over northern lands. Nature Climate Change, 2013, 3, 581-586.	8.1	485
6	Key indicators of Arctic climate change: 1971â€“2017. Environmental Research Letters, 2019, 14, 045010.	2.2	471
7	The resilience and functional role of moss in boreal and arctic ecosystems. New Phytologist, 2012, 196, 49-67.	3.5	322
8	Importance of recent shifts in soil thermal dynamics on growing season length, productivity, and carbon sequestration in terrestrial high-latitude ecosystems. Global Change Biology, 2006, 12, 731-750.	4.2	292
9	The changing global carbon cycle: linking plantâ€“soil carbon dynamics to global consequences. Journal of Ecology, 2009, 97, 840-850.	1.9	262
10	The unseen iceberg: plant roots in arctic tundra. New Phytologist, 2015, 205, 34-58.	3.5	260
11	An assessment of the carbon balance of Arctic tundra: comparisons among observations, process models, and atmospheric inversions. Biogeosciences, 2012, 9, 3185-3204.	1.3	258
12	Plant functional types in Earth system models: past experiences and future directions for application of dynamic vegetation models in high-latitude ecosystems. Annals of Botany, 2014, 114, 1-16.	1.4	240
13	Large loss of CO2 in winter observed across the northern permafrost region. Nature Climate Change, 2019, 9, 852-857.	8.1	225
14	Changes in vegetation in northern Alaska under scenarios of climate change, 2003â€“2100: implications for climate feedbacks. Ecological Applications, 2009, 19, 1022-1043.	1.8	185
15	Carbon dioxide sources from Alaska driven by increasing early winter respiration from Arctic tundra. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 5361-5366.	3.3	149
16	Energy feedbacks of northern high-latitude ecosystems to the climate system due to reduced snow cover during 20th century warming. Global Change Biology, 2007, 13, 2425-2438.	4.2	138
17	Seasonal patterns of carbon dioxide and water fluxes in three representative tundra ecosystems in northern Alaska. Ecosphere, 2012, 3, 1-19.	1.0	128
18	Interactive effects of wildfire and climate on permafrost degradation in Alaskan lowland forests. Journal of Geophysical Research G: Biogeosciences, 2015, 120, 1619-1637.	1.3	113

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19	Retrieving landscape freeze/thaw state from Soil Moisture Active Passive (SMAP) radar and radiometer measurements. Remote Sensing of Environment, 2017, 194, 48-62.	4.6	113
20	Increasing contribution of peatlands to boreal evapotranspiration in a warming climate. Nature Climate Change, 2020, 10, 555-560.	8.1	106
21	Long-Term Release of Carbon Dioxide from Arctic Tundra Ecosystems in Alaska. Ecosystems, 2017, 20, 960-974.	1.6	102
22	Polygonal tundra geomorphological change in response to warming alters future <scp>CO</scp>₂ and <scp>CH</scp>₄ flux on the Barrow Peninsula. Global Change Biology, 2015, 21, 1634-1651.	4.2	100
23	Differential response of carbon fluxes to climate in three peatland ecosystems that vary in the presence and stability of permafrost. Journal of Geophysical Research G: Biogeosciences, 2014, 119, 1576-1595.	1.3	94
24	New dataâ€driven estimation of terrestrial CO₂ fluxes in Asia using a standardized database of eddy covariance measurements, remote sensing data, and support vector regression. Journal of Geophysical Research G: Biogeosciences, 2017, 122, 767-795.	1.3	90
25	Evidence and implications of recent and projected climate change in Alaska's forest ecosystems. Ecosphere, 2011, 2, art124.	1.0	87
26	Effects of permafrost thaw on nitrogen availability and plantâ€“soil interactions in a boreal Alaskan lowland. Journal of Ecology, 2016, 104, 1542-1554.	1.9	84
27	Statistical upscaling of ecosystem CO₂ fluxes across the terrestrial tundra and boreal domain: Regional patterns and uncertainties. Global Change Biology, 2021, 27, 4040-4059.	4.2	83
28	FLUXNET-CH₄: a global, multi-ecosystem dataset and analysis of methane seasonality from freshwater wetlands. Earth System Science Data, 2021, 13, 3607-3689.	3.7	79
29	Growing season and spatial variations of carbon fluxes of Arctic and boreal ecosystems in Alaska (USA). Ecological Applications, 2013, 23, 1798-1816.	1.8	74
30	A decade of boreal rich fen greenhouse gas fluxes in response to natural and experimental water table variability. Global Change Biology, 2017, 23, 2428-2440.	4.2	74
31	Thermokarst rates intensify due to climate change and forest fragmentation in an Alaskan boreal forest lowland. Global Change Biology, 2016, 22, 816-829.	4.2	69
32	The SMAP Level 4 Carbon Product for Monitoring Ecosystem Landâ€“Atmosphere CO₂ Exchange. IEEE Transactions on Geoscience and Remote Sensing, 2017, 55, 6517-6532.	2.7	69
33	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
34	Warming Effects of Spring Rainfall Increase Methane Emissions From Thawing Permafrost. Geophysical Research Letters, 2019, 46, 1393-1401.	1.5	68
35	Modeling the effects of fire severity and climate warming on active layer thickness and soil carbon storage of black spruce forests across the landscape in interior Alaska. Environmental Research Letters, 2013, 8, 045016.	2.2	66
36	Global transpiration data from sap flow measurements: the SAPFLUXNET database. Earth System Science Data, 2021, 13, 2607-2649.	3.7	65

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37	Tundra photosynthesis captured by satelliteâ€observed solarâ€induced chlorophyll fluorescence. Geophysical Research Letters, 2017, 44, 1564-1573.	1.5	62
38	Upscaling terrestrial carbon dioxide fluxes in Alaska with satellite remote sensing and support vector regression. Journal of Geophysical Research G: Biogeosciences, 2013, 118, 1266-1281.	1.3	60
39	Identifying dominant environmental predictors of freshwater wetland methane fluxes across diurnal to seasonal time scales. Global Change Biology, 2021, 27, 3582-3604.	4.2	59
40	The Sphagnome Project: enabling ecological and evolutionary insights through a genusâ€level sequencing project. New Phytologist, 2018, 217, 16-25.	3.5	54
41	Towards a Tipping Point in Responding to Change: Rising Costs, Fewer Options for Arctic and Global Societies. Ambio, 2012, 41, 66-74.	2.8	49
42	The role of snow cover affecting boreal-arctic soil freezeâ€“thaw and carbon dynamics. Biogeosciences, 2015, 12, 5811-5829.	1.3	48
43	Spring photosynthetic onset and net <scp>CO</scp>₂ uptake in Alaska triggered by landscape thawing. Global Change Biology, 2018, 24, 3416-3435.	4.2	48
44	Consequences of changes in vegetation and snow cover for climate feedbacks in Alaska and northwest Canada. Environmental Research Letters, 2016, 11, 105003.	2.2	47
45	The Borealâ€“Arctic Wetland and Lake Dataset (BAWLD). Earth System Science Data, 2021, 13, 5127-5149.	3.7	46
46	Projected changes in atmospheric heating due to changes in fire disturbance and the snow season in the western Arctic, 2003â€“2100. Journal of Geophysical Research, 2009, 114, .	3.3	45
47	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
48	Increased highâ€latitude photosynthetic carbon gain offset by respiration carbon loss during an anomalous warm winter to spring transition. Global Change Biology, 2020, 26, 682-696.	4.2	41
49	The Exceptionally Warm Winter of 2015/16 in Alaska. Journal of Climate, 2017, 30, 2069-2088.	1.2	38
50	Inferring CO₂ fertilization effect based on global monitoring land-atmosphere exchange with a theoretical model. Environmental Research Letters, 2020, 15, 084009.	2.2	38
51	Substantial hysteresis in emergent temperature sensitivity of global wetland CH4 emissions. Nature Communications, 2021, 12, 2266.	5.8	34
52	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
53	The biophysical climate mitigation potential of boreal peatlands during the growing season. Environmental Research Letters, 2020, 15, 104004.	2.2	31
54	Changes in the structure and function of northern <scp>A</scp>laskan ecosystems when considering variable leafâ€out times across groupings of species in a dynamic vegetation model. Global Change Biology, 2014, 20, 963-978.	4.2	29

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55	An estimated cost of lost climate regulation services caused by thawing of the Arctic cryosphere. Ecological Applications, 2013, 23, 1869-1880.	1.8	27
56	The role of driving factors in historical and projected carbon dynamics of upland ecosystems in Alaska. Ecological Applications, 2018, 28, 5-27.	1.8	25
57	Local-scale Arctic tundra heterogeneity affects regional-scale carbon dynamics. Nature Communications, 2020, 11, 4925.	5.8	25
58	A multi-scale comparison of modeled and observed seasonal methane emissions in northern wetlands. Biogeosciences, 2016, 13, 5043-5056.	1.3	24
59	Reanalysis in Earth System Science: Toward Terrestrial Ecosystem Reanalysis. Reviews of Geophysics, 2021, 59, e2020RG000715.	9.0	24
60	Soil respiration strongly offsets carbon uptake in Alaska and Northwest Canada. Environmental Research Letters, 2021, 16, 084051.	2.2	23
61	The ABCflux database: Arcticâ€“boreal CO₂ flux observations and ancillary information aggregated to monthly time steps across terrestrial ecosystems. Earth System Science Data, 2022, 14, 179-208.	3.7	22
62	Demography of snowshoe hares in relation to regional climate variability during a 10-year population cycle in interior AlaskaThis article is one of a selection of papers from The Dynamics of Change in Alaskaâ€™s Boreal Forests: Resilience and Vulnerability in Response to Climate Warming.. Canadian Journal of Forest Research, 2010, 40, 1265-1272.	0.8	21
63	Upscaling of CO₂ fluxes from heterogeneous tundra plant communities in Arctic Alaska. Journal of Geophysical Research, 2012, 117, .	3.3	21
64	Interannual and Seasonal Patterns of Carbon Dioxide, Water, and Energy Fluxes From Ecotonal and Thermokarstâ€Impacted Ecosystems on Carbonâ€Rich Permafrost Soils in Northeastern Siberia. Journal of Geophysical Research G: Biogeosciences, 2017, 122, 2651-2668.	1.3	19
65	Estimation of surface energy fluxes in the Arctic tundra using the remote sensing thermal-based Two-Source Energy Balance model. Hydrology and Earth System Sciences, 2017, 21, 1339-1358.	1.9	19
66	A portable miniaturized laser heterodyne radiometer (mini-LHR) for remote measurements of column CH4 and CO2. Applied Physics B: Lasers and Optics, 2019, 125, 1.	1.1	19
67	Change in surface energy balance in Alaska due to fire and spring warming, based on upscaling eddy covariance measurements. Journal of Geophysical Research G: Biogeosciences, 2014, 119, 1947-1969.	1.3	18
68	Optimization of a biochemical model with eddy covariance measurements in black spruce forests of Alaska for estimating CO2 fertilization effects. Agricultural and Forest Meteorology, 2016, 222, 98-111.	1.9	18
69	Carbon Fluxes and Microbial Activities From Boreal Peatlands Experiencing Permafrost Thaw. Journal of Geophysical Research G: Biogeosciences, 2021, 126, e2020JG005869.	1.3	18
70	Carbon fluxes in a young, naturally regenerating jack pine ecosystem. Journal of Geophysical Research, 2006, 111, .	3.3	17
71	The Effects of Different Climate Input Datasets on Simulated Carbon Dynamics in the Western Arctic. Earth Interactions, 2007, 11, 1-24.	0.7	17
72	Earlier snowmelt may lead to late season declines in plant productivity and carbon sequestration in Arctic tundra ecosystems. Scientific Reports, 2022, 12, 3986.	1.6	16

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73	When the Source of Flooding Matters: Divergent Responses in Carbon Fluxes in an Alaskan Rich Fen to Two Types of Inundation. Ecosystems, 2020, 23, 1138-1153.	1.6	13
74	Resource selection and movement of male moose in response to varying levels of offâ€road vehicle access. Ecosphere, 2018, 9, e02405.	1.0	11
75	The role of environmental driving factors in historical and projected carbon dynamics of wetland ecosystems in Alaska. Ecological Applications, 2018, 28, 1377-1395.	1.8	11
76	Solar position confounds the relationship between ecosystem function and vegetation indices derived from solar and photosynthetically active radiation fluxes. Agricultural and Forest Meteorology, 2021, 298-299, 108291.	1.9	10
77	Closing the Winter Gapâ€”Yearâ€Round Measurements of Soil CO₂ Emission Sources in Arctic Tundra. Geophysical Research Letters, 2022, 49, .	1.5	9
78	The Biophysical Role of Water and Ice Within Permafrost Nearing Collapse: Insights From Novel Geophysical Observations. Journal of Geophysical Research F: Earth Surface, 2021, 126, e2021JF006104.	1.0	8
79	Assessing methane emissions for northern peatlands in ORCHIDEE-PEAT revision 7020. Geoscientific Model Development, 2022, 15, 2813-2838.	1.3	8
80	Permafrost Mapping with Electrical Resistivity Tomography: A Case Study in Two Wetland Systems in Interior Alaska. Journal of Environmental and Engineering Geophysics, 2020, 25, 199-209.	1.0	7
81	Impacts of Arctic Shrubs on Root Traits and Belowground Nutrient Cycles Across a Northern Alaskan Climate Gradient. Frontiers in Plant Science, 2020, 11, 588098.	1.7	7
82	The changing carbon balance of tundra ecosystems: results from a vertically-resolved peatland biosphere model. Environmental Research Letters, 2022, 17, 014019.	2.2	7
83	Exposure to cold temperature affects the spring phenology of Alaskan deciduous vegetation types. Environmental Research Letters, 2020, 15, 025006.	2.2	6
84	A new approach to simulate peat accumulation, degradation and stability in a global land surface scheme (JULES vn5.8_accumulate_soil) for northern and temperate peatlands. Geoscientific Model Development, 2022, 15, 1633-1657.	1.3	6
85	Potential Satellite Monitoring of Surface Organic Soil Properties in Arctic Tundra From SMAP. Water Resources Research, 2022, 58, .	1.7	6
86	Tundra burning in 2007 â€“ Did sea ice retreat matter?. Polar Science, 2015, 9, 185-195.	0.5	5
87	Synergies Among Environmental Science Research and Monitoring Networks: A Research Agenda. Earth's Future, 2021, 9, e2020EF001631.	2.4	5
88	Coâ€producing knowledge: the Integrated Ecosystem Model for resource management in Arctic Alaska. Frontiers in Ecology and the Environment, 2020, 18, 447-455.	1.9	3
89	Assessing dynamic vegetation model parameter uncertainty across Alaskan arctic tundra plant communities. Ecological Applications, 2022, 32, e02499.	1.8	3
90	Diagnosis of Atmospheric Drivers of High-Latitude Evapotranspiration Using Structural Equation Modeling. Atmosphere, 2021, 12, 1359.	1.0	2

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91	Current knowledge and uncertainties associated with the Arctic greenhouse gas budget. , 2022, , 159-201.		1
92	Greenhouse Gases and Energy Fluxes at Permafrost Zone. , 2021, , 527-558.		0