Hannu Marttila

List of Publications by Year in descending order

Source: https://exaly.com/author-pdf/7058298/publications.pdf

Version: 2024-02-01

92	1,635	279798	395702
papers	citations	23 h-index	33 g-index

119	119	119	1927
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Dynamics of erosion and suspended sediment transport from drained peatland forestry. Journal of Hydrology, 2010, 388, 414-425.	5.4	89
2	Long-term variations and trends in precipitation in Finland. International Journal of Climatology, 2014, 34, 3139-3153.	3.5	58
3	Changes in short term river flow regulation and hydropeaking in Nordic rivers. Scientific Reports, 2018, 8, 17232.	3.3	56
4	Waterâ€tableâ€dependent hydrological changes following peatland forestry drainage and restoration: Analysis of restoration success. Water Resources Research, 2016, 52, 3742-3760.	4.2	53
5	Development of a new index to assess river regime impacts after dam construction. Global and Planetary Change, 2014, 122, 186-196.	3.5	52
6	Climateâ€induced warming imposes a threat to north European spring ecosystems. Global Change Biology, 2015, 21, 4561-4569.	9.5	52
7	Assessing impacts of climate change and river regulation on flow regimes in cold climate: A study of a pristine and a regulated river in the sub-arctic setting of Northern Europe. Journal of Hydrology, 2016, 542, 410-422.	5.4	44
8	Restoration of nutrient-rich forestry-drained peatlands poses a risk for high exports of dissolved organic carbon, nitrogen, and phosphorus. Science of the Total Environment, 2017, 586, 858-869.	8.0	44
9	Arctic sea-ice loss fuels extreme European snowfall. Nature Geoscience, 2021, 14, 283-288.	12.9	39
10	Erosion and delivery of deposited peat sediment. Water Resources Research, 2008, 44, .	4.2	33
11	Century-long variability and trends in daily precipitation characteristics at three Finnish stations. Advances in Climate Change Research, 2016, 7, 54-69.	5.1	33
12	Thermal and hydrologic responses to climate change predict marked alterations in boreal stream invertebrate assemblages. Global Change Biology, 2018, 24, 2434-2446.	9.5	31
13	Potential impacts of a future Nordic bioeconomy on surface water quality. Ambio, 2020, 49, 1722-1735.	5.5	31
14	Managing runoff, water quality and erosion in peatland forestry by peak runoff control. Ecological Engineering, 2010, 36, 900-911.	3.6	30
15	Changes in Pore Water Quality After Peatland Restoration: Assessment of a Largeâ€Scale, Replicated Beforeâ€Afterâ€Controlâ€Impact Study in Finland. Water Resources Research, 2017, 53, 8327-8343.	4.2	30
16	A synthesis of the impacts of ditch network maintenance on the quantity and quality of runoff from drained boreal peatland forests. Ambio, 2018, 47, 523-534.	5.5	30
17	Increasing and Decreasing Nitrogen and Phosphorus Trends in Runoff from Drained Peatland Forestsâ€”Is There a Legacy Effect of Drainage or Not?. Water, Air, and Soil Pollution, 2018, 229, 1.	2.4	30
18	Snow to Precipitation Ratio Controls Catchment Storage and Summer Flows in Boreal Headwater Catchments. Water Resources Research, 2019, 55, 4096-4109.	4.2	30

#	Article	IF	Citations
19	Long-term purification efficiency and factors affecting performance in peatland-based treatment wetlands: An analysis of 28 peat extraction sites in Finland. Ecological Engineering, 2018, 117, 153-164.	3.6	28
20	Climateâ€driven hydrological variability determines interâ€annual changes in stream invertebrate community assembly. Oikos, 2018, 127, 1586-1595.	2.7	27
21	Elevated nutrient concentrations in headwaters affected by drained peatland. Science of the Total Environment, 2018, 643, 1304-1313.	8.0	27
22	Environmental predictability of taxonomic and functional community composition in highâ€latitude streams. Freshwater Biology, 2017, 62, 1-16.	2.4	25
23	Differential responses by stream and riparian biodiversity to inâ€stream restoration of forestryâ€impacted streams. Journal of Applied Ecology, 2017, 54, 1505-1514.	4.0	24
24	Quantifying spatial groundwater dependence in peatlands through a distributed isotope mass balance approach. Water Resources Research, 2017, 53, 2524-2541.	4.2	24
25	Ditch erosion processes and sediment transport in a drained peatland forest. Ecological Engineering, 2015, 75, 421-433.	3.6	23
26	Impact of peatland forestry on runoff water quality in areas with sulphide-bearing sediments; how to prevent acid surges. Forest Ecology and Management, 2013, 293, 17-28.	3.2	22
27	Ditch network maintenance in peat-dominated boreal forests: Review and analysis of water quality management options. Ambio, 2018, 47, 535-545.	5.5	22
28	Spatially varying peatland initiation, Holocene development, carbon accumulation patterns and radiative forcing within a subarctic fen. Quaternary Science Reviews, 2020, 248, 106596.	3.0	21
29	What conditions favor the influence of seasonally frozen ground on hydrological partitioning? A systematic review. Environmental Research Letters, 2021, 16, 043008.	5.2	21
30	Use of Turbidity Measurements to Estimate Suspended Solids and Nutrient Loads from Peatland Forestry Drainage. Journal of Irrigation and Drainage Engineering - ASCE, 2012, 138, 1088-1096.	1.0	20
31	Defining the natural flow regimes of boreal rivers: relationship with benthic macroinvertebrate communities. Freshwater Science, 2016, 35, 559-572.	1.8	20
32	Landâ€use dominates climate controls on nitrogen and phosphorus export from managed and natural Nordic headwater catchments. Hydrological Processes, 2020, 34, 4831-4850.	2.6	20
33	Effect of soil properties on peat erosion and suspended sediment delivery in drained peatlands. Water Resources Research, 2014, 50, 3523-3535.	4.2	19
34	Spatial and temporal variation in particle size and particulate organic matter content in suspended particulate matter from peatlandâ€dominated catchments in Finland. Hydrological Processes, 2015, 29, 1069-1079.	2.6	19
35	Predicting organic matter, nitrogen, and phosphorus concentrations in runoff from peat extraction sites using partial least squares regression. Water Resources Research, 2017, 53, 5860-5876.	4.2	19
36	Environmental conditions of boreal springs explained by capture zone characteristics. Journal of Hydrology, 2015, 531, 992-1002.	5.4	18

#	Article	IF	Citations
37	Can lake sensitivity to desiccation be predicted from lake geometry?. Journal of Hydrology, 2016, 539, 599-610.	5.4	18
38	A new evolutionary time series model for streamflow forecasting in boreal lake-river systems. Theoretical and Applied Climatology, 2022, 148, 255-268.	2.8	18
39	Retention of Sediment and Nutrient Loads with Peak Runoff Control. Journal of Irrigation and Drainage Engineering - ASCE, 2009, 135, 210-216.	1.0	17
40	Storage, properties and seasonal variations in fineâ€grained bed sediment within the main channel and headwaters of the River Sanginjoki, Finland. Hydrological Processes, 2014, 28, 4756-4765.	2.6	17
41	Can treatment wetlands be constructed on drained peatlands for efficient purification of peat extraction runoff?. Geoderma, 2014, 228-229, 33-43.	5.1	16
42	Water sources for woody shrubs on hillslopes: An investigation using isotopic and sapflow methods. Ecohydrology, 2018, 11, e1926.	2.4	16
43	Hydrology and hydraulics of treatment wetlands constructed on drained peatlands. Ecological Engineering, 2015, 75, 232-241.	3.6	15
44	The role of aluminium and iron in phosphorus removal by treatment peatlands. Ecological Engineering, 2016, 86, 190-201.	3.6	14
45	Erosion mechanisms and sediment sources in a peatland forest after ditch cleaning. Earth Surface Processes and Landforms, 2016, 41, 1841-1853.	2.5	13
46	Does transpiration from invasive stream side willows dominate lowâ€flow conditions? An investigation using hydrometric and isotopic methods in a headwater catchment. Ecohydrology, 2018, 11, e1930.	2.4	13
47	Effects of Drainage and Subsequent Restoration on Peatland Hydrological Processes at Catchment Scale. Water Resources Research, 2018, 54, 4479-4497.	4.2	13
48	A power market-based operation support model for sub-daily hydropower regulation practices. Applied Energy, 2019, 255, 113905.	10.1	13
49	Framework for designing and applying peak runoff control structures for peatland forestry conditions. Forest Ecology and Management, 2010, 260, 1262-1273.	3.2	12
50	Transport of particle-associated elements in two agriculture-dominated boreal river systems. Science of the Total Environment, 2013, 461-462, 693-705.	8.0	12
51	Evaluation of erosion and surface roughness in peatland forest ditches using pin meter measurements and terrestrial laser scanning. Earth Surface Processes and Landforms, 2016, 41, 1299-1311.	2.5	12
52	Model-based evaluation of sediment control in a drained peatland forest after ditch network maintenance. Canadian Journal of Forest Research, 2018, 48, 130-140.	1.7	12
53	Conceptual Mini-Catchment Typologies for Testing Dominant Controls of Nutrient Dynamics in Three Nordic Countries. Water (Switzerland), 2020, 12, 1776.	2.7	12
54	Hydroclimatic Controls on the Isotopic (Î´18 O, Î´2 H, d-excess) Traits of Pan-Arctic Summer Rainfall Events. Frontiers in Earth Science, 2021, 9, .	1.8	12

#	Article	IF	Citations
55	Thickness of peat influences the leaching of substances and greenhouse gas emissions from a cultivated organic soil. Science of the Total Environment, 2022, 806, 150499.	8.0	12
56	Calibration of turbidity meter and acoustic doppler velocimetry (Tritonâ€ADV) for sediment types present in drained peatland headwaters: Focus on particulate organic peat. River Research and Applications, 2010, 26, 1019-1035.	1.7	11
57	Sediment transport dynamics in small agricultural catchments in a cold climate: A case study from Norway. Agriculture, Ecosystems and Environment, 2021, 317, 107484.	5.3	11
58	A tracer-based method for classifying groundwater dependence in boreal headwater streams. Journal of Hydrology, 2019, 577, 123762.	5.4	10
59	Arctic Snow Isotope Hydrology: A Comparative Snow-Water Vapor Study. Atmosphere, 2021, 12, 150.	2.3	10
60	Hydraulic and Physical Properties of Managed and Intact Peatlands: Application of the Van Genuchtenâ€Mualem Models to Peat Soils. Water Resources Research, 2021, 57, e2020WR028624.	4.2	10
61	Subarctic catchment water storage and carbon cycling â€“ Leading the way for future studies using integrated datasets at Pallas, Finland. Hydrological Processes, 2021, 35, e14350.	2.6	10
62	A Method for Assessment of Subâ€Daily Flow Alterations Using Wavelet Analysis for Regulated Rivers. Water Resources Research, 2022, 58, .	4.2	10
63	Modeling sediment transport after ditch network maintenance of a forested peatland. Water Resources Research, 2016, 52, 9001-9019.	4.2	8
64	Very High Spatial Resolution Soil Moisture Observation of Heterogeneous Subarctic Catchment Using Nonlocal Averaging and Multitemporal SAR Data. IEEE Transactions on Geoscience and Remote Sensing, 2022, 60, 1-17.	6.3	8
65	Iron in boreal river catchments: Biogeochemical, ecological and management implications. Science of the Total Environment, 2022, 805, 150256.	8.0	8
66	Stable water isotopes as a tool for assessing groundwater infiltration in sewage networks in cold climate conditions. Journal of Environmental Management, 2022, 302, 114107.	7.8	8
67	Hydraulic Geometry, Hydraulics and Sediment Properties of Forest Brooks after Extensive Erosion from Upland Peatland Drainage. Open Journal of Modern Hydrology, 2012, 02, 59-69.	1.0	7
68	Unmanned Aircraft System (UAS) Structure-From-Motion (SfM) for Monitoring the Changed Flow Paths and Wetness in Minerotrophic Peatland Restoration. Remote Sensing, 2022, 14, 3169.	4.0	7
69	A current precipitation index-based model for continuous daily runoff simulation in seasonally snow covered sub-arctic catchments. Journal of Hydrology, 2017, 545, 182-196.	5.4	6
70	Predicting iron transport in boreal agriculture-dominated catchments under a changing climate. Science of the Total Environment, 2020, 714, 136743.	8.0	6
71	Development of Aerial Photos and LIDAR Data Approaches to Map Spatial and Temporal Evolution of Ditch Networks in Peat-Dominated Catchments. Journal of Irrigation and Drainage Engineering - ASCE, 2021, 147, .	1.0	6
72	Hydrology under change: long-term annual and seasonal changes in small agricultural catchments in Norway. Hydrology Research, 2021, 52, 1542-1558.	2.7	6

#	Article	IF	Citations
73	Purification efficiency of a peatland-based treatment wetland during snowmelt and runoff events. Ecological Engineering, 2015, 84, 169-179.	3.6	5
74	Peak Spring Flood Discharge Magnitude and Timing in Natural Rivers across Northern Finland: Long-Term Variability, Trends, and Links to Climate Teleconnections. Water (Switzerland), 2022, 14, 1312.	2.7	5
75	Effect and design of an underminer structure. Journal of Hydraulic Research/De Recherches Hydrauliques, 2010, 48, 188-196.	1.7	4
76	Snow profile temperature measurements in spatiotemporal analysis of snowmelt in a subarctic forest-mire hillslope. Cold Regions Science and Technology, 2018, 151, 119-132.	3.5	4
77	Restoration increases transient storages in boreal headwater streams. River Research and Applications, 2018, 34, 1278-1285.	1.7	4
78	Understanding variability in root zone storage capacity in boreal regions. Hydrology and Earth System Sciences, 2019, 23, 125-138.	4.9	4
79	Combined use of satellite image analysis, land-use statistics, and land-use-specific export coefficients to predict nutrients in drained peatland catchment. Science of the Total Environment, 2021, 779, 146419.	8.0	4
80	Accuracy assessment of remotely sensed data to analyze lake water balance in semi-arid region. Science of the Total Environment, 2021, 797, 149034.	8.0	4
81	pH-levels in intensively drained and peatland-dominated river basin: Paleolimnological approach to detect impacts of past land use. Ecological Engineering, 2014, 64, 367-376.	3.6	3
82	Assessment of uncertainty in constructed wetland treatment performance and load estimation methods. Environmental Monitoring and Assessment, 2016, 188, 365.	2.7	3
83	Optimization of Gravity-Driven Hydraulic Flocculators to Treat Peat Extraction Runoff Water. Journal of Irrigation and Drainage Engineering - ASCE, 2016, 142, 04015045.	1.0	3
84	A simple model structure enhances parameter identification and improves runoff prediction in ungauged high-latitude catchments. Journal of Hydrology, 2018, 563, 395-410.	5.4	3
85	Contribution of flow conditions and sand addition on hyporheic zone exchange in gravel beds. Hydrology Research, 2019, 50, 878-885.	2.7	2
86	Fungal assemblages in predictive stream bioassessment: A cross-taxon comparison along multiple stressor gradients. Ecological Indicators, 2021, 121, 106986.	6.3	2
87	Quantifying groundwater fluxes from an aapa mire to a riverside esker formation. Hydrology Research, 2021, 52, 585-596.	2.7	2
88	Soiden ennallistamisen suoluonto-, vesistÃ¶-, ja ilmastovaikutukset. Vertaisarvioitu raportti.. Suomen Luontopaneelin Julkaisuja, 0, , .	0.0	2
89	Effect of peak runoff control method on growth of Scots pine stands on drained peatlands in central Finland. Silva Fennica, 2011, 45, .	1.3	2
90	Nordic hydrological frontier in the 21st century. Hydrology Research, 2022, 53, 700-715.	2.7	2

#	Article	IF	Citations
91	Atmospheric circulation patterns influencing variations in organic carbon fluxes in the River Oulujoki, Finland. Water and Environment Journal, 2015, 29, 474-481.	2.2	1
92	Smart drainage management to limit summer drought damage in Nordic agriculture under the circular economy concept. Hydrological Processes, 2022, 36, .	2.6	1