Hannu Marttila

List of Publications by Year in descending order

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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	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
2	Iron in boreal river catchments: Biogeochemical, ecological and management implications. Science of the Total Environment, 2022, 805, 150256.	8.0	8
3	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
4	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
5	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
6	Smart drainage management to limit summer drought damage in Nordic agriculture under the circular economy concept. Hydrological Processes, 2022, 36, .	2.6	1
7	A Method for Assessment of Subâ€Daily Flow Alterations Using Wavelet Analysis for Regulated Rivers. Water Resources Research, 2022, 58, .	4.2	10
8	Nordic hydrological frontier in the 21st century. Hydrology Research, 2022, 53, 700-715.	2.7	2
9	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
10	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
11	Fungal assemblages in predictive stream bioassessment: A cross-taxon comparison along multiple stressor gradients. Ecological Indicators, 2021, 121, 106986.	6.3	2
12	Arctic Snow Isotope Hydrology: A Comparative Snow-Water Vapor Study. Atmosphere, 2021, 12, 150.	2.3	10
13	Quantifying groundwater fluxes from an aapa mire to a riverside esker formation. Hydrology Research, 2021, 52, 585-596.	2.7	2
14	What conditions favor the influence of seasonally frozen ground on hydrological partitioning? A systematic review. Environmental Research Letters, 2021, 16, 043008.	5.2	21
15	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
16	Arctic sea-ice loss fuels extreme European snowfall. Nature Geoscience, 2021, 14, 283-288.	12.9	39
17	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
18	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

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19	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
20	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
21	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
22	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
23	Hydrology under change: long-term annual and seasonal changes in small agricultural catchments in Norway. Hydrology Research, 2021, 52, 1542-1558.	2.7	6
24	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
25	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
26	Potential impacts of a future Nordic bioeconomy on surface water quality. Ambio, 2020, 49, 1722-1735.	5.5	31
27	Conceptual Mini-Catchment Typologies for Testing Dominant Controls of Nutrient Dynamics in Three Nordic Countries. Water (Switzerland), 2020, 12, 1776.	2.7	12
28	Predicting iron transport in boreal agriculture-dominated catchments under a changing climate. Science of the Total Environment, 2020, 714, 136743.	8.0	6
29	A power market-based operation support model for sub-daily hydropower regulation practices. Applied Energy, 2019, 255, 113905.	10.1	13
30	Snow to Precipitation Ratio Controls Catchment Storage and Summer Flows in Boreal Headwater Catchments. Water Resources Research, 2019, 55, 4096-4109.	4.2	30
31	A tracer-based method for classifying groundwater dependence in boreal headwater streams. Journal of Hydrology, 2019, 577, 123762.	5.4	10
32	Contribution of flow conditions and sand addition on hyporheic zone exchange in gravel beds. Hydrology Research, 2019, 50, 878-885.	2.7	2
33	Understanding variability in root zone storage capacity in boreal regions. Hydrology and Earth System Sciences, 2019, 23, 125-138.	4.9	4
34	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
35	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
36	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

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37	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
38	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
39	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
40	Water sources for woody shrubs on hillslopes: An investigation using isotopic and sapflow methods. Ecohydrology, 2018, 11, e1926.	2.4	16
41	Changes in short term river flow regulation and hydropeaking in Nordic rivers. Scientific Reports, 2018, 8, 17232.	3.3	56
42	Restoration increases transient storages in boreal headwater streams. River Research and Applications, 2018, 34, 1278-1285.	1.7	4
43	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
44	Climateâ€driven hydrological variability determines interâ€annual changes in stream invertebrate community assembly. Oikos, 2018, 127, 1586-1595.	2.7	27
45	Elevated nutrient concentrations in headwaters affected by drained peatland. Science of the Total Environment, 2018, 643, 1304-1313.	8.0	27
46	Effects of Drainage and Subsequent Restoration on Peatland Hydrological Processes at Catchment Scale. Water Resources Research, 2018, 54, 4479-4497.	4.2	13
47	Ditch network maintenance in peat-dominated boreal forests: Review and analysis of water quality management options. Ambio, 2018, 47, 535-545.	5.5	22
48	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
49	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
50	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
51	Quantifying spatial groundwater dependence in peatlands through a distributed isotope mass balance approach. Water Resources Research, 2017, 53, 2524-2541.	4.2	24
52	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
53	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
54	Environmental predictability of taxonomic and functional community composition in highâ€latitude streams. Freshwater Biology, 2017, 62, 1-16.	2.4	25

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55	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
56	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
57	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
58	Modeling sediment transport after ditch network maintenance of a forested peatland. Water Resources Research, 2016, 52, 9001-9019.	4.2	8
59	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
60	Defining the natural flow regimes of boreal rivers: relationship with benthic macroinvertebrate communities. Freshwater Science, 2016, 35, 559-572.	1.8	20
61	Can lake sensitivity to desiccation be predicted from lake geometry?. Journal of Hydrology, 2016, 539, 599-610.	5.4	18
62	Assessment of uncertainty in constructed wetland treatment performance and load estimation methods. Environmental Monitoring and Assessment, 2016, 188, 365.	2.7	3
63	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
64	Erosion mechanisms and sediment sources in a peatland forest after ditch cleaning. Earth Surface Processes and Landforms, 2016, 41, 1841-1853.	2.5	13
65	The role of aluminium and iron in phosphorus removal by treatment peatlands. Ecological Engineering, 2016, 86, 190-201.	3.6	14
66	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
67	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
68	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
69	Climateâ€induced warming imposes a threat to north European spring ecosystems. Global Change Biology, 2015, 21, 4561-4569.	9.5	52
70	Ditch erosion processes and sediment transport in a drained peatland forest. Ecological Engineering, 2015, 75, 421-433.	3.6	23
71	Purification efficiency of a peatland-based treatment wetland during snowmelt and runoff events. Ecological Engineering, 2015, 84, 169-179.	3.6	5
72	Environmental conditions of boreal springs explained by capture zone characteristics. Journal of Hydrology, 2015, 531, 992-1002.	5.4	18

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73	Hydrology and hydraulics of treatment wetlands constructed on drained peatlands. Ecological Engineering, 2015, 75, 232-241.	3.6	15
74	Long-term variations and trends in precipitation in Finland. International Journal of Climatology, 2014, 34, 3139-3153.	3.5	58
75	Can treatment wetlands be constructed on drained peatlands for efficient purification of peat extraction runoff?. Geoderma, 2014, 228-229, 33-43.	5.1	16
76	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
77	Development of a new index to assess river regime impacts after dam construction. Global and Planetary Change, 2014, 122, 186-196.	3.5	52
78	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
79	Effect of soil properties on peat erosion and suspended sediment delivery in drained peatlands. Water Resources Research, 2014, 50, 3523-3535.	4.2	19
80	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
81	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
82	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
83	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
84	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
85	Effect and design of an underminer structure. Journal of Hydraulic Research/De Recherches Hydrauliques, 2010, 48, 188-196.	1.7	4
86	Dynamics of erosion and suspended sediment transport from drained peatland forestry. Journal of Hydrology, 2010, 388, 414-425.	5.4	89
87	Managing runoff, water quality and erosion in peatland forestry by peak runoff control. Ecological Engineering, 2010, 36, 900-911.	3.6	30
88	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
89	Framework for designing and applying peak runoff control structures for peatland forestry conditions. Forest Ecology and Management, 2010, 260, 1262-1273.	3.2	12
90	Retention of Sediment and Nutrient Loads with Peak Runoff Control. Journal of Irrigation and Drainage Engineering - ASCE, 2009, 135, 210-216.	1.0	17

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91	Erosion and delivery of deposited peat sediment. Water Resources Research, 2008, 44, .	4.2	33
92	Soiden ennallistamisen suoluonto-, vesistÃ¶-, ja ilmastovaikutukset. Vertaisarvioitu raportti.. Suomen Luontopaneelin Julkaisuja, 0, , .	0.0	2