

Matti Maltamo

List of Publications by Year in descending order

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98
papers

4,339
citations

101543

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98
docs citations

98
times ranked

2712
citing authors

#	ARTICLE	IF	CITATIONS
1	A Comparison of Linear-Mode and Single-Photon Airborne LiDAR in Species-Specific Forest Inventories. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 2022, 60, 1-14.	6.3	5
2	Modeling Forest Tree Data Using Sequential Spatial Point Processes. <i>Journal of Agricultural, Biological, and Environmental Statistics</i> , 2022, 27, 88-108.	1.4	2
3	Effects of numbers of observations and predictors for various model types on the performance of forest inventory with airborne laser scanning. <i>Canadian Journal of Forest Research</i> , 2022, 52, 385-395.	1.7	11
4	Refining and evaluating a Horvitzâ€“Thompson-like stand density estimator in individual tree detection based on airborne laser scanning. <i>Canadian Journal of Forest Research</i> , 2022, 52, 527-538.	1.7	3
5	Horvitzâ€“Thompsonâ€“like estimation with distanceâ€“based detection probabilities for circular plot sampling of forests. <i>Biometrics</i> , 2021, 77, 715-728.	1.4	4
6	Comparison of linear regression, k-nearest neighbour and random forest methods in airborne laser-scanning-based prediction of growing stock. <i>Forestry</i> , 2021, 94, 311-323.	2.3	20
7	Prediction error aggregation behaviour for remote sensing augmented forest inventory approaches. <i>Forestry</i> , 2021, 94, 576-587.	2.3	8
8	Detection of European Aspen (<i>Populus tremula</i> L.) Based on an Unmanned Aerial Vehicle Approach in Boreal Forests. <i>Remote Sensing</i> , 2021, 13, 1723.	4.0	6
9	Determining maximum entropy in 3D remote sensing height distributions and using it to improve aboveground biomass modelling via stratification. <i>Remote Sensing of Environment</i> , 2021, 260, 112464.	11.0	14
10	Predicting bilberry and cowberry yields using airborne laser scanning and other auxiliary data combined with National Forest Inventory field plot data. <i>Forest Ecology and Management</i> , 2021, 502, 119737.	3.2	3
11	Transferability of ALS-based forest attribute models when predicting with drone-based image point cloud data. <i>International Journal of Applied Earth Observation and Geoinformation</i> , 2021, 103, 102484.	2.8	0
12	Forest inventories for small areas using drone imagery without in-situ field measurements. <i>Remote Sensing of Environment</i> , 2020, 237, 111404.	11.0	27
13	Fusing diameter distributions predicted by an area-based approach and individual-tree detection in coniferous-dominated forests. <i>Canadian Journal of Forest Research</i> , 2020, 50, 113-125.	1.7	6
14	Prediction of forest canopy fuel parameters in managed boreal forests using multispectral and unispectral airborne laser scanning data and aerial images. <i>European Journal of Remote Sensing</i> , 2020, 53, 245-257.	3.5	11
15	Field calibration of merchantable and sawlog volumes in forest inventories based on airborne laser scanning. <i>Canadian Journal of Forest Research</i> , 2020, 50, 1352-1364.	1.7	6
16	Evaluating the accuracy of ALS-based removal estimates against actual logging data. <i>Annals of Forest Science</i> , 2020, 77, 1.	2.0	6
17	Nearest neighbor imputation of logwood volumes using bi-temporal ALS, multispectral ALS and aerial images. <i>Scandinavian Journal of Forest Research</i> , 2019, 34, 469-483.	1.4	3
18	Comparison of multispectral airborne laser scanning and stereo matching of aerial images as a single sensor solution to forest inventories by tree species. <i>Remote Sensing of Environment</i> , 2019, 231, 111208.	11.0	32

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19	Estimating forest stand density and structure using Bayesian individual tree detection, stochastic geometry, and distribution matching. <i>ISPRS Journal of Photogrammetry and Remote Sensing</i> , 2019, 152, 66-78.	11.1	20
20	Resolution dependence in an area-based approach to forest inventory with airborne laser scanning. <i>Remote Sensing of Environment</i> , 2019, 224, 192-201.	11.0	28
21	A Simple Approach of Groundwater Quality Analysis, Classification, and Mapping in Peshawar, Pakistan. <i>Environments - MDPI</i> , 2019, 6, 123.	3.3	9
22	Multispectral Airborne LiDAR Data in the Prediction of Boreal Tree Species Composition. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 2019, 57, 3462-3471.	6.3	43
23	Predicting tree diameter using allometry described by non-parametric locally-estimated copulas from tree dimensions derived from airborne laser scanning. <i>Forest Ecology and Management</i> , 2019, 434, 205-212.	3.2	12
24	The transferability of airborne laser scanning based tree-level models between different inventory areas. <i>Canadian Journal of Forest Research</i> , 2019, 49, 228-236.	1.7	12
25	A simple approach to forest structure classification using airborne laser scanning that can be adopted across bioregions. <i>Forest Ecology and Management</i> , 2019, 433, 111-121.	3.2	22
26	Estimating stand level stem diameter distribution utilizing harvester data and airborne laser scanning. <i>Silva Fennica</i> , 2019, 53, .	1.3	20
27	Remote sensing and forest inventories in Nordic countries – roadmap for the future. <i>Scandinavian Journal of Forest Research</i> , 2018, 33, 397-412.	1.4	111
28	Calibration of nationwide airborne laser scanning based stem volume models. <i>Remote Sensing of Environment</i> , 2018, 210, 179-192.	11.0	13
29	Comparing nearest neighbor configurations in the prediction of species-specific diameter distributions. <i>Annals of Forest Science</i> , 2018, 75, 1.	2.0	12
30	How much can airborne laser scanning based forest inventory by tree species benefit from auxiliary optical data?. <i>International Journal of Applied Earth Observation and Geoinformation</i> , 2018, 72, 91-98.	2.8	7
31	GIS-based DRASTIC model for groundwater vulnerability and pollution risk assessment in the Peshawar District, Pakistan. <i>Arabian Journal of Geosciences</i> , 2018, 11, 1.	1.3	15
32	Incorporating tree- and stand-level information on crown base height into multivariate forest management inventories based on airborne laser scanning. <i>Silva Fennica</i> , 2018, 52, .	1.3	13
33	Image matching as a data source for forest inventory – Comparison of Semi-Global Matching and Next-Generation Automatic Terrain Extraction algorithms in a typical managed boreal forest environment. <i>International Journal of Applied Earth Observation and Geoinformation</i> , 2017, 60, 11-21.	2.8	14
34	Effects of plot size, stand density, and scan density on the relationship between airborne laser scanning metrics and the Gini coefficient of tree size inequality. <i>Canadian Journal of Forest Research</i> , 2017, 47, 1590-1602.	1.7	13
35	Key structural features of Boreal forests may be detected directly using L-moments from airborne lidar data. <i>Remote Sensing of Environment</i> , 2017, 194, 437-446.	11.0	47
36	Effect of flying altitude, scanning angle and scanning mode on the accuracy of ALS based forest inventory. <i>International Journal of Applied Earth Observation and Geoinformation</i> , 2016, 52, 349-360.	2.8	30

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37	Species-specific combination and calibration between area-based and tree-based diameter distributions using airborne laser scanning. Canadian Journal of Forest Research, 2016, 46, 753-765.	1.7	15
38	Simple approach to improving the extraction of canopy metrics from airborne laser scanning data for tropical forests. Journal of Applied Remote Sensing, 2016, 10, 016019.	1.3	0
39	Classification of multilayered forest development classes from low-density national airborne lidar datasets. Forestry, 2016, 89, 392-401.	2.3	28
40	Classification of forest land attributes using multi-source remotely sensed data. International Journal of Applied Earth Observation and Geoinformation, 2016, 44, 11-22.	2.8	14
41	Gini coefficient predictions from airborne lidar remote sensing display the effect of management intensity on forest structure. Ecological Indicators, 2016, 60, 574-585.	6.3	45
42	Effect of minimum diameter at breast height and standing dead wood field measurements on the accuracy of ALS-based forest inventory. Canadian Journal of Forest Research, 2015, 45, 1280-1288.	1.7	7
43	Impact of Plot Size and Spatial Pattern of Forest Attributes on Sampling Efficacy. Forest Science, 2015, 61, 847-860.	1.0	15
44	Retrieving Suppressed Trees from Model-Based Height Distribution by Combining High- and Low-Density Airborne Laser Scanning Data. Canadian Journal of Remote Sensing, 2014, 40, 233-242.	2.4	4
45	Airborne laser scanning-based decision support for wood procurement planning. Scandinavian Journal of Forest Research, 2014, 29, 132-143.	1.4	38
46	Bayesian Approach to Tree Detection Based on Airborne Laser Scanning Data. IEEE Transactions on Geoscience and Remote Sensing, 2014, 52, 2690-2699.	6.3	56
47	Comparison of airborne laser scanning methods for estimating forest structure indicators based on Lorenz curves. ISPRS Journal of Photogrammetry and Remote Sensing, 2014, 95, 23-33.	11.1	40
48	Moose (<i>Alces alces</i>) reacts to high summer temperatures by utilizing thermal shelters in boreal forests – an analysis based on airborne laser scanning of the canopy structure at moose locations. Global Change Biology, 2014, 20, 1115-1125.	9.5	85
49	Calibration of area based diameter distribution with individual tree based diameter estimates using airborne laser scanning. ISPRS Journal of Photogrammetry and Remote Sensing, 2014, 93, 65-75.	11.1	40
50	Species-Specific Management Inventory in Finland. Managing Forest Ecosystems, 2014, , 241-252.	0.9	47
51	Assessing Dead Wood by Airborne Laser Scanning. Managing Forest Ecosystems, 2014, , 375-395.	0.9	10
52	Inventory of Forest Plantations. Managing Forest Ecosystems, 2014, , 253-268.	0.9	0
53	Characterizing forest structural types and shelterwood dynamics from Lorenz-based indicators predicted by airborne laser scanning. Canadian Journal of Forest Research, 2013, 43, 1063-1074.	1.7	55
54	Predicting the spatial pattern of trees by airborne laser scanning. International Journal of Remote Sensing, 2013, 34, 5154-5165.	2.9	38

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55	Predicting species-specific basal areas in urban forests using airborne laser scanning and existing stand register data. <i>European Journal of Forest Research</i> , 2013, 132, 999-1012.	2.5	12
56	Patterns of covariance between airborne laser scanning metrics and Lorenz curve descriptors of tree size inequality. <i>Canadian Journal of Remote Sensing</i> , 2013, 39, S18-S31.	2.4	25
57	Variable selection strategies for nearest neighbor imputation methods used in remote sensing based forest inventory. <i>Canadian Journal of Remote Sensing</i> , 2012, 38, 557-569.	2.4	60
58	Predicting and calibrating tree attributes by means of airborne laser scanning and field measurements. <i>Canadian Journal of Forest Research</i> , 2012, 42, 1896-1907.	1.7	32
59	Diversity and equitability ordering profiles applied to study forest structure. <i>Forest Ecology and Management</i> , 2012, 276, 185-195.	3.2	65
60	Comparing individual tree detection and the area-based statistical approach for the retrieval of forest stand characteristics using airborne laser scanning in Scots pine stands. <i>Canadian Journal of Forest Research</i> , 2011, 41, 583-598.	1.7	54
61	Airborne Laser Scanning for the Site Type Identification of Mature Boreal Forest Stands. <i>Remote Sensing</i> , 2011, 3, 100-116.	4.0	11
62	Using airborne laser scanning data for detecting canopy gaps and their understory type in mature boreal forest. <i>Annals of Forest Science</i> , 2011, 68, 825-835.	2.0	31
63	ALS-based estimation of plot volume and site index in a eucalyptus plantation with a nonlinear mixed-effect model that accounts for the clone effect. <i>Annals of Forest Science</i> , 2011, 68, 1085.	2.0	47
64	Airborne discrete-return LIDAR data in the estimation of vertical canopy cover, angular canopy closure and leaf area index. <i>Remote Sensing of Environment</i> , 2011, 115, 1065-1080.	11.0	305
65	Request-driven generation of calculation chains for adaptive forest analysis. <i>Scandinavian Journal of Forest Research</i> , 2011, 26, 2-10.	1.4	1
66	Prediction of Timber Quality Parameters of Forest Stands by Means of Small Footprint Airborne Laser Scanner Data. <i>International Journal of Forest Engineering</i> , 2011, 22, 14-23.	0.8	10
67	Imputation of single-tree attributes using airborne laser scanning-based height, intensity, and alpha shape metrics. <i>Remote Sensing of Environment</i> , 2010, 114, 1263-1276.	11.0	178
68	The comparison of airborne laser scanning-based probability layers as auxiliary information for assessing coarse woody debris. <i>International Journal of Remote Sensing</i> , 2010, 31, 1245-1259.	2.9	10
69	Neural Networks for the Prediction of Species-Specific Plot Volumes Using Airborne Laser Scanning and Aerial Photographs. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 2010, 48, 1076-1085.	6.3	37
70	Tree species classification using airborne LiDAR " effects of stand and tree parameters, downsizing of training set, intensity normalization, and sensor type. <i>Silva Fennica</i> , 2010, 44, .	1.3	195
71	Non-parametric prediction of diameter distributions using airborne laser scanner data. <i>Scandinavian Journal of Forest Research</i> , 2009, 24, 541-553.	1.4	51
72	Identification of boreal forest stands with high herbaceous plant diversity using airborne laser scanning. <i>Forest Ecology and Management</i> , 2009, 257, 46-53.	3.2	27

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73	Predicting tree attributes and quality characteristics of Scots pine using airborne laser scanning data. <i>Silva Fennica</i> , 2009, 43, .	1.3	89
74	Estimation of species-specific diameter distributions using airborne laser scanning and aerial photographs. <i>Canadian Journal of Forest Research</i> , 2008, 38, 1750-1760.	1.7	109
75	Effects of pulse density on predicting characteristics of individual trees of Scandinavian commercial species using alpha shape metrics based on airborne laser scanning data. <i>Canadian Journal of Remote Sensing</i> , 2008, 34, S441-S459.	2.4	47
76	Detection of Aspens Using High Resolution Aerial Laser Scanning Data and Digital Aerial Images. <i>Sensors</i> , 2008, 8, 5037-5054.	3.8	26
77	Estimating species-specific diameter distributions and saw log recoveries of boreal forests from airborne laser scanning data and aerial photographs: a distribution-based approach. <i>Silva Fennica</i> , 2008, 42, .	1.3	43
78	The k-MSN method for the prediction of species-specific stand attributes using airborne laser scanning and aerial photographs. <i>Remote Sensing of Environment</i> , 2007, 109, 328-341.	11.0	206
79	A comparative study of the use of laser scanner data and field measurements in the prediction of crown height in boreal forests. <i>Scandinavian Journal of Forest Research</i> , 2006, 21, 231-238.	1.4	23
80	Estimation of stem volume using laser scanning-based canopy height metrics. <i>Forestry</i> , 2006, 79, 217-229.	2.3	140
81	Automatic detection of harvested trees and determination of forest growth using airborne laser scanning. <i>Remote Sensing of Environment</i> , 2004, 90, 451-462.	11.0	262
82	Accuracy of partially visually assessed stand characteristics: a case study of Finnish forest inventory by compartments. <i>Canadian Journal of Forest Research</i> , 2004, 34, 916-930.	1.7	38
83	Laser scanning of forest resources: the nordic experience. <i>Scandinavian Journal of Forest Research</i> , 2004, 19, 482-499.	1.4	386
84	A percentile based basal area diameter distribution model for predicting the stand development of <i>Pinus kesiya</i> plantations in Zambia and Zimbabwe. <i>Forest Ecology and Management</i> , 2003, 172, 109-124.	3.2	11
85	Calibrating predicted diameter distribution with additional information in growth and yield predictions. <i>Canadian Journal of Forest Research</i> , 2003, 33, 430-434.	1.7	13
86	Title is missing!. <i>New Forests</i> , 2002, 23, 207-223.	1.7	22
87	Forest stand characteristics estimation using a most similar neighbor approach and image spatial structure information. <i>Remote Sensing of Environment</i> , 2001, 78, 223-228.	11.0	61
88	Application of Most Similar Neighbor Inference for Estimating Marked Stand Characteristics Using Harvester and Inventory Generated Stem Databases. <i>International Journal of Forest Engineering</i> , 2001, 12, 33-41.	0.8	21
89	Title is missing!. <i>New Forests</i> , 2000, 20, 65-86.	1.7	16
90	Differences in the structure of primary and managed forests in East Kalimantan, Indonesia. <i>Forest Ecology and Management</i> , 2000, 129, 63-74.	3.2	22

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91	Comparison of percentile based prediction methods and the Weibull distribution in describing the diameter distribution of heterogeneous Scots pine stands. <i>Forest Ecology and Management</i> , 2000, 133, 263-274.	3.2	112
92	Determination of the spatial distribution of trees from digital aerial photographs. <i>Forest Ecology and Management</i> , 1998, 110, 275-282.	3.2	44
93	Methods based on <i>k</i> -nearest neighbor regression in the prediction of basal area diameter distribution. <i>Canadian Journal of Forest Research</i> , 1998, 28, 1107-1115.	1.7	109
94	The "nearest-neighbour" method for estimating basal area diameter distribution. <i>Scandinavian Journal of Forest Research</i> , 1997, 12, 200-208.	1.4	56
95	The structure of forest stands in virgin and managed peatlands: a comparison between Finnish and Russian Karelia. <i>Forest Ecology and Management</i> , 1997, 96, 125-138.	3.2	36
96	Impact of forest management history on the state of forests in relation to natural forest succession Comparative study, North Karelia, Finland vs. Republic of Karelia, Russian Federation. <i>Forest Ecology and Management</i> , 1996, 83, 71-85.	3.2	28
97	Sapwood and heartwood taper in Scots pine stems. <i>Canadian Journal of Forest Research</i> , 1995, 25, 1928-1943.	1.7	22
98	Comparison of beta and weibull functions for modelling basal area diameter distribution in stands of <i>pinus sylvestris</i> and <i>picea abies</i> . <i>Scandinavian Journal of Forest Research</i> , 1995, 10, 284-295.	1.4	101