Erik NÃ¦sset

List of Publications by Year
in descending order

130 papers	8,644 citations	50276 46 h-index	45317 90 g-index
131 all docs	131 docs citations	131 times ranked	4830 citing authors

#	Article	IF	Citations
1	Predicting forest stand characteristics with airborne scanning laser using a practical two-stage procedure and field data. Remote Sensing of Environment, 2002, 80, 88-99.	11.0	1,090
2	Lidar sampling for large-area forest characterization: A review. Remote Sensing of Environment, 2012, 121, 196-209.	11.0	553
3	Determination of mean tree height of forest stands using airborne laser scanner data. ISPRS Journal of Photogrammetry and Remote Sensing, 1997, 52, 49-56.	11.1	462
4	Practical large-scale forest stand inventory using a small-footprint airborne scanning laser. Scandinavian Journal of Forest Research, 2004, 19, 164-179.	1.4	420
5	Laser scanning of forest resources: the nordic experience. Scandinavian Journal of Forest Research, 2004, 19, 482-499.	1.4	386
6	Inventory of Small Forest Areas Using an Unmanned Aerial System. Remote Sensing, 2015, 7, 9632-9654.	4.0	269
7	Airborne laser scanning as a method in operational forest inventory: Status of accuracy assessments accomplished in Scandinavia. Scandinavian Journal of Forest Research, 2007, 22, 433-442.	1.4	225
8	Tree crown delineation and tree species classification in boreal forests using hyperspectral and ALS data. Remote Sensing of Environment, 2014, 140, 306-317.	11.0	222
9	Mapping defoliation during a severe insect attack on Scots pine using airborne laser scanning. Remote Sensing of Environment, 2006, 102, 364-376.	11.0	204
10	Effects of different sensors, flying altitudes, and pulse repetition frequencies on forest canopy metrics and biophysical stand properties derived from small-footprint airborne laser data. Remote Sensing of Environment, 2009, 113, 148-159.	11.0	201
11	Assessing effects of laser point density, ground sampling intensity, and field sample plot size on biophysical stand properties derived from airborne laser scanner data. Canadian Journal of Forest Research, 2008, 38, 1095-1109.	1.7	165
12	Model-based inference for biomass estimation in a LiDAR sample survey in Hedmark County, NorwayThis article is one of a selection of papers from Extending Forest Inventory and Monitoring over Space and Time.. Canadian Journal of Forest Research, 2011, 41, 96-107.	1.7	147
13	Inference for lidar-assisted estimation of forest growing stock volume. Remote Sensing of Environment, 2013, 128, 268-275.	11.0	147
14	Model-assisted estimation of biomass in a LiDAR sample survey in Hedmark County, NorwayThis article is one of a selection of papers from Extending Forest Inventory and Monitoring over Space and Time.. Canadian Journal of Forest Research, 2011, 41, 83-95.	1.7	139
15	Advances and emerging issues in national forest inventories. Scandinavian Journal of Forest Research, 2010, 25, 368-381.	1.4	136
16	Combining UAV and Sentinel-2 auxiliary data for forest growing stock volume estimation through hierarchical model-based inference. Remote Sensing of Environment, 2018, 204, 485-497.	11.0	120
17	Remote sensing and forest inventories in Nordic countries â€“ roadmap for the future. Scandinavian Journal of Forest Research, 2018, 33, 397-412.	1.4	111
18	Assessing effects of positioning errors and sample plot size on biophysical stand properties derived from airborne laser scanner data. Canadian Journal of Forest Research, 2009, 39, 1036-1052.	1.7	109

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19	Using remotely sensed data to construct and assess forest attribute maps and related spatial products. Scandinavian Journal of Forest Research, 2010, 25, 340-367.	1.4	108
20	Aboveground biomass density models for NASAâ€™s Global Ecosystem Dynamics Investigation (GEDI) lidar mission. Remote Sensing of Environment, 2022, 270, 112845.	11.0	108
21	Model-assisted estimation of change in forest biomass over an 11year period in a sample survey supported by airborne LiDAR: A case study with post-stratification to provide â€œactivity dataâ€. Remote Sensing of Environment, 2013, 128, 299-314.	11.0	106
22	Use of models in large-area forest surveys: comparing model-assisted, model-based and hybrid estimation. Forest Ecosystems, 2016, 3, .	3.1	105
23	Estimating biomass in Hedmark County, Norway using national forest inventory field plots and airborne laser scanning. Remote Sensing of Environment, 2012, 123, 443-456.	11.0	102
24	Single tree detection in heterogeneous boreal forests using airborne laser scanning and area-based stem number estimates. International Journal of Remote Sensing, 2012, 33, 5171-5193.	2.9	95
25	The Role and Need for Space-Based Forest Biomass-Related Measurements in Environmental Management and Policy. Surveys in Geophysics, 2019, 40, 757-778.	4.6	92
26	Taking stock of circumboreal forest carbon with ground measurements, airborne and spaceborne LiDAR. Remote Sensing of Environment, 2013, 137, 274-287.	11.0	85
27	Comparing biophysical forest characteristics estimated from photogrammetric matching of aerial images and airborne laser scanning data. Scandinavian Journal of Forest Research, 2015, 30, 73-86.	1.4	82
28	A new approach with DTM-independent metrics for forest growing stock prediction using UAV photogrammetric data. Remote Sensing of Environment, 2018, 213, 195-205.	11.0	79
29	Weibull and percentile models for lidar-based estimation of basal area distribution. Scandinavian Journal of Forest Research, 2005, 20, 490-502.	1.4	70
30	Estimating Quebec provincial forest resources using ICESat/GLAS. Canadian Journal of Forest Research, 2009, 39, 862-881.	1.7	66
31	Characterizing forest species composition using multiple remote sensing data sources and inventory approaches. Scandinavian Journal of Forest Research, 2013, 28, 677-688.	1.4	65
32	Modeling Aboveground Biomass in Dense Tropical Submontane Rainforest Using Airborne Laser Scanner Data. Remote Sensing, 2015, 7, 788-807.	4.0	65
33	Assessing 3D point clouds from aerial photographs for species-specific forest inventories. Scandinavian Journal of Forest Research, 2017, 32, 68-79.	1.4	65
34	Detection of biomass change in a Norwegian mountain forest area using small footprint airborne laser scanner data. Statistical Methods and Applications, 2013, 22, 113-129.	1.2	61
35	Area-Based Inventory in Norway â€“ From Innovation to an Operational Reality. Managing Forest Ecosystems, 2014, , 215-240.	0.9	61
36	Using airborne laser scanning to monitor tree migration in the borealâ€“alpine transition zone. Remote Sensing of Environment, 2007, 110, 357-369.	11.0	60

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37	Effects of field plot size on prediction accuracy of aboveground biomass in airborne laser scanning-assisted inventories in tropical rain forests of Tanzania. Carbon Balance and Management, 2015, 10, 10.	3.2	59
38	Simultaneously acquired airborne laser scanning and multispectral imagery for individual tree species identification. Canadian Journal of Remote Sensing, 2012, 38, 125-138.	2.4	58
39	Statistical rigor in LiDAR-assisted estimation of aboveground forest biomass. Remote Sensing of Environment, 2016, 173, 98-108.	11.0	58
40	Hierarchical model-based inference for forest inventory utilizing three sources of information. Annals of Forest Science, 2016, 73, 895-910.	2.0	55
41	Mapping and estimating the total living biomass and carbon in low-biomass woodlands using Landsat 8 CDR data. Carbon Balance and Management, 2016, 11, 13.	3.2	53
42	Generalized Hierarchical Model-Based Estimation for Aboveground Biomass Assessment Using GEDI and Landsat Data. Remote Sensing, 2018, 10, 1832.	4.0	53
43	Estimating percentile-based diameter distributions in uneven-sized Norway spruce stands using airborne laser scanner data. Scandinavian Journal of Forest Research, 2007, 22, 33-47.	1.4	52
44	Non-parametric prediction of diameter distributions using airborne laser scanner data. Scandinavian Journal of Forest Research, 2009, 24, 541-553.	1.4	51
45	Semi-supervised SVM for individual tree crown species classification. ISPRS Journal of Photogrammetry and Remote Sensing, 2015, 110, 77-87.	11.1	51
46	The effects of field plot size on model-assisted estimation of aboveground biomass change using multitemporal interferometric SAR and airborne laser scanning data. Remote Sensing of Environment, 2015, 168, 252-264.	11.0	49
47	Predicting stem diameters and aboveground biomass of individual trees using remote sensing data. Ecological Indicators, 2018, 85, 367-376.	6.3	49
48	Estimating single-tree branch biomass of Norway spruce with terrestrial laser scanning using voxel-based and crown dimension features. Scandinavian Journal of Forest Research, 2013, 28, 456-469.	1.4	48
49	Forest biomass change estimated from height change in interferometric SAR height models. Carbon Balance and Management, 2014, 9, 5.	3.2	48
50	Tree species classification in Norway from airborne hyperspectral and airborne laser scanning data. European Journal of Remote Sensing, 2018, 51, 336-351.	3.5	48
51	Assessing forest inventory information obtained from different inventory approaches and remote sensing data sources. Annals of Forest Science, 2015, 72, 33-45.	2.0	46
52	Large-scale estimation of change in aboveground biomass in miombo woodlands using airborne laser scanning and national forest inventory data. Remote Sensing of Environment, 2017, 188, 106-117.	11.0	46
53	Geo-referencing forest field plots by co-registration of terrestrial and airborne laser scanning data. International Journal of Remote Sensing, 2014, 35, 3135-3149.	2.9	44
54	Model-assisted forest inventory with parametric, semiparametric, and nonparametric models. Canadian Journal of Forest Research, 2016, 46, 855-868.	1.7	40

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55	Assessing components of the model-based mean square error estimator for remote sensing assisted forest applications. Canadian Journal of Forest Research, 2018, 48, 642-649.	1.7	40
56	Cost-Sensitive Active Learning With Lookahead: Optimizing Field Surveys for Remote Sensing Data Classification. IEEE Transactions on Geoscience and Remote Sensing, 2014, 52, 6652-6664.	6.3	39
57	Comparing the accuracies of forest attributes predicted from airborne laser scanning and digital aerial photogrammetry in operational forest inventories. Remote Sensing of Environment, 2019, 226, 26-37.	11.0	39
58	Estimating Single-Tree Crown Biomass of Norway Spruce by Airborne Laser Scanning: A Comparison of Methods with and without the Use of Terrestrial Laser Scanning to Obtain the Ground Reference Data. Forests, 2014, 5, 384-403.	2.1	37
59	Effects of UAV Image Resolution, Camera Type, and Image Overlap on Accuracy of Biomass Predictions in a Tropical Woodland. Remote Sensing, 2019, 11, 948.	4.0	36
60	Detection of small single trees in the forestâ€“tundra ecotone using height values from airborne laser scanning. Canadian Journal of Remote Sensing, 2011, 37, 264-274.	2.4	35
61	Effects of Pulse Density on Digital Terrain Models and Canopy Metrics Using Airborne Laser Scanning in a Tropical Rainforest. Remote Sensing, 2015, 7, 8453-8468.	4.0	35
62	Automatic Estimation of Tree Position and Stem Diameter Using a Moving Terrestrial Laser Scanner. Remote Sensing, 2017, 9, 350.	4.0	35
63	Direct and indirect site index determination for Norway spruce and Scots pine using bitemporal airborne laser scanner data. Forest Ecology and Management, 2018, 428, 104-114.	3.2	33
64	Digital aerial photogrammetry can efficiently support large-area forest inventories in Norway. Forestry, 2017, 90, 710-718.	2.3	32
65	Methods for evaluating the utilities of local and global maps for increasing the precision of estimates of subtropical forest area. Canadian Journal of Forest Research, 2016, 46, 924-932.	1.7	29
66	Large-scale estimation of aboveground biomass in miombo woodlands using airborne laser scanning and national forest inventory data. Remote Sensing of Environment, 2016, 186, 626-636.	11.0	26
67	Weibull models for single-tree increment of Norway spruce, Scots pine, birch and other broadleaves in Norway. Scandinavian Journal of Forest Research, 2009, 24, 54-66.	1.4	25
68	Individual tree crown approach for predicting site index in boreal forests using airborne laser scanning and hyperspectral data. International Journal of Applied Earth Observation and Geoinformation, 2017, 60, 72-82.	2.8	25
69	Predicting Selected Forest Stand Characteristics with Multispectral ALS Data. Remote Sensing, 2018, 10, 586.	4.0	25
70	Modelling aboveground forest biomass using airborne laser scanner data in the miombo woodlands of Tanzania. Carbon Balance and Management, 2015, 10, 28.	3.2	24
71	Performance of GPS Precise Point Positioning Under Conifer Forest Canopies. Photogrammetric Engineering and Remote Sensing, 2008, 74, 661-668.	0.6	23
72	Accurate single-tree positions from a harvester: a test of two global satellite-based positioning systems. Scandinavian Journal of Forest Research, 2017, 32, 774-781.	1.4	22

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73	Monitoring forest carbon in a Tanzanian woodland using interferometric SAR: a novel methodology for REDD+. Carbon Balance and Management, 2015, 10, 14.	3.2	21
74	Prediction of Species-Specific Volume Using Different Inventory Approaches by Fusing Airborne Laser Scanning and Hyperspectral Data. Remote Sensing, 2017, 9, 400.	4.0	21
75	Mapping Above- and Below-Ground Carbon Pools in Boreal Forests: The Case for Airborne Lidar. PLoS ONE, 2015, 10, e0138450.	2.5	21
76	Relative Efficiency of ALS and InSAR for Biomass Estimation in a Tanzanian Rainforest. Remote Sensing, 2015, 7, 9865-9885.	4.0	20
77	Comparison of linear regression, k-nearest neighbour and random forest methods in airborne laser-scanning-based prediction of growing stock. Forestry, 2021, 94, 311-323.	2.3	20
78	Classifications of Forest Change by Using Bitemporal Airborne Laser Scanner Data. Remote Sensing, 2019, 11, 2145.	4.0	18
79	Modelling bird richness and bird species presence in a boreal forest reserve using airborne laser-scanning and aerial images. Bird Study, 2014, 61, 204-219.	1.0	17
80	Vertical Height Errors in Digital Terrain Models Derived from Airborne Laser Scanner Data in a Boreal-Alpine Ecotone in Norway. Remote Sensing, 2015, 7, 4702-4725.	4.0	16
81	The efficiency of poststratification compared with model-assisted estimation. Canadian Journal of Forest Research, 2017, 47, 515-526.	1.7	16
82	Estimation of biomass change in montane forests in Norway along a 1200â€…km latitudinal gradient using airborne laser scanning: a comparison of direct and indirect prediction of change under a model-based inferential approach. Scandinavian Journal of Forest Research, 2018, 33, 155-165.	1.4	16
83	Comparing frameworks for biomass prediction for the Global Ecosystem Dynamics Investigation. Remote Sensing of Environment, 2022, 278, 113074.	11.0	16
84	Detection and Segmentation of Small Trees in the Forest-Tundra Ecotone Using Airborne Laser Scanning. Remote Sensing, 2016, 8, 407.	4.0	15
85	Predicting Attributes of Regeneration Forests Using Airborne Laser Scanning. Canadian Journal of Remote Sensing, 2016, 42, 541-553.	2.4	15
86	Post-stratified change estimation for large-area forest biomass using repeated ALS strip sampling. Canadian Journal of Forest Research, 2017, 47, 839-847.	1.7	14
87	Estimation of Forest Area and Canopy Cover Based on Visual Interpretation of Satellite Images in Ethiopia. Land, 2018, 7, 92.	2.9	14
88	Using a Finer Resolution Biomass Map to Assess the Accuracy of a Regional, Map-Based Estimate of Forest Biomass. Surveys in Geophysics, 2019, 40, 1001-1015.	4.6	14
89	Classifying tree and nontree echoes from airborne laser scanning in the forestâ€“tundra ecotone. Canadian Journal of Remote Sensing, 2013, 38, 655-666.	2.4	13
90	Modeling biophysical properties of broad-leaved stands in the hyrcanian forests of Iran using fused airborne laser scanner data and ultraCam-D images. International Journal of Applied Earth Observation and Geoinformation, 2017, 61, 32-45.	2.8	13

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91	Effects of terrain slope and aspect on the error of ALS-based predictions of forest attributes. Forestry, 2018, 91, 225-237.	2.3	13
92	Multi-sensor forest vegetation height mapping methods for Tanzania. European Journal of Remote Sensing, 2018, 51, 587-606.	3.5	13
93	Utilizing accurately positioned harvester data: modelling forest volume with airborne laser scanning. Canadian Journal of Forest Research, 2018, 48, 913-922.	1.7	13
94	The effects of temporal differences between map and ground data on map-assisted estimates of forest area and biomass. Annals of Forest Science, 2016, 73, 839-847.	2.0	12
95	Use of Remotely Sensed Data to Enhance Estimation of Aboveground Biomass for the Dry Afromontane Forest in South-Central Ethiopia. Remote Sensing, 2020, 12, 3335.	4.0	12
96	Relationships between single-tree mountain birch summertime albedo and vegetation properties. Agricultural and Forest Meteorology, 2021, 307, 108470.	4.8	12
97	An Estimator of Variance for Two-Stage Ratio Regression Estimators. Forest Science, 2014, 60, 663-676.	1.0	11
98	Remote Sensing Support for the Gain-Loss Approach for Greenhouse Gas Inventories. Remote Sensing, 2020, 12, 1891.	4.0	11
99	Models for predicting above-ground biomass of <i>Betula pubescens</i> spp. <i>czerepanÃ³vii</i> in mountain areas of southern Norway. Scandinavian Journal of Forest Research, 2009, 24, 318-332.	1.4	10
100	Automatic Detection of Small Single Trees in the Forest-Tundra Ecotone Using Airborne Laser Scanning. Remote Sensing, 2014, 6, 10152-10170.	4.0	10
101	Comparing Empirical and Semi-Empirical Approaches to Forest Biomass Modelling in Different Biomes Using Airborne Laser Scanner Data. Forests, 2017, 8, 170.	2.1	10
102	Monitoring small pioneer trees in the forest-tundra ecotone: using multi-temporal airborne laser scanning data to model height growth. Environmental Monitoring and Assessment, 2018, 190, 12.	2.7	10
103	The relative role of climate and herbivory in driving treeline dynamics along a latitudinal gradient. Journal of Vegetation Science, 2020, 31, 392-402.	2.2	10
104	Coupling a differential global navigation satellite system to a cut-to-length harvester operating system enables precise positioning of harvested trees. International Journal of Forest Engineering, 2021, 32, 119-127.	0.8	10
105	Combining airborne laser scanning and Landsat data for statistical modeling of soil carbon and tree biomass in Tanzanian Miombo woodlands. Carbon Balance and Management, 2017, 12, 8.	3.2	9
106	Modelling Site Index in Forest Stands Using Airborne Hyperspectral Imagery and Bi-Temporal Laser Scanner Data. Remote Sensing, 2019, 11, 1020.	4.0	9
107	A framework for a forest ecological base map â€" An example from Norway. Ecological Indicators, 2022, 136, 108636.	6.3	9
108	Model-based inference for<i>k</i>-nearest neighbours predictions using a canonical vine copula. Scandinavian Journal of Forest Research, 2013, 28, 266-281.	1.4	8

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109	A poststratified ratio estimator for model-assisted biomass estimation in sample-based airborne laser scanning surveys. Canadian Journal of Forest Research, 2016, 46, 1386-1395.	1.7	8
110	Improving Classification of Airborne Laser Scanning Echoes in the Forest-Tundra Ecotone Using Geostatistical and Statistical Measures. Remote Sensing, 2014, 6, 4582-4599.	4.0	7
111	Spatially consistent imputations of forest data under a semivariogram model. Canadian Journal of Forest Research, 2016, 46, 1145-1156.	1.7	7
112	A Model-Dependent Method for Monitoring Subtle Changes in Vegetation Height in the Borealâ€"Alpine Ecotone Using Bi-Temporal, Three Dimensional Point Data from Airborne Laser Scanning. Remote Sensing, 2019, 11, 1804.	4.0	7
113	Unsupervised Selection of Training Samples for Tree Species Classification Using Hyperspectral Data. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2014, 7, 3560-3569.	4.9	6
114	Conditioning post-stratified inference following two-stage, equal-probability sampling. Environmental and Ecological Statistics, 2016, 23, 141-154.	3.5	6
115	Economic utility of 3D remote sensing data for estimation of site index in Nordic commercial forest inventories: a comparison of airborne laser scanning, digital aerial photogrammetry and conventional practices. Scandinavian Journal of Forest Research, 2021, 36, 55-67.	1.4	6
116	Detection of Root, Butt, and Stem Rot presence in Norway spruce with hyperspectral imagery. Silva Fennica, 2022, 56, .	1.3	6
117	A new prediction-based variance estimator for two-stage model-assisted surveys of forest resources. Remote Sensing of Environment, 2017, 192, 1-11.	11.0	5
118	Use of local and global maps of forest canopy height and aboveground biomass to enhance local estimates of biomass in miombo woodlands in Tanzania. International Journal of Applied Earth Observation and Geoinformation, 2020, 89, 102109.	2.8	5
119	Accommodating heteroscedasticity in allometric biomass models. Forest Ecology and Management, 2022, 505, 119865.	3.2	5
120	Discrimination between Ground Vegetation and Small Pioneer Trees in the Boreal-Alpine Ecotone Using Intensity Metrics Derived from Airborne Laser Scanner Data. Remote Sensing, 2016, 8, 548.	4.0	4
121	Generation of Lidar-Predicted Forest Biomass Maps from Radar Backscatter with Conditional Generative Adversarial Networks. , 2020, , .		4
122	Modeling tree species diversity by combining ALS data and digital aerial photogrammetry. Science of Remote Sensing, 2020, 2, 100011.	4.8	3
123	Comparing 3D Point Cloud Data from Laser Scanning and Digital Aerial Photogrammetry for Height Estimation of Small Trees and Other Vegetation in a Borealâ€"Alpine Ecotone. Remote Sensing, 2021, 13, 2469.	4.0	3
124	Wood Decay Detection in Norway Spruce Forests Based on Airborne Hyperspectral and ALS Data. Remote Sensing, 2022, 14, 1892.	4.0	3
125	Optimizing the ground sample collection with cost-sensitive active learning for tree species classification using hyperspectral images. , 2013, , .		2
126	Optimizing Field Data Collection for Individual Tree Attribute Predictions Using Active Learning Methods. Remote Sensing, 2019, 11, 949.	4.0	2

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127	Fine-Spatial Borealâ€"Alpine Single-Tree Albedo Measured by UAV: Experiences and Challenges. Remote Sensing, 2022, 14, 1482.	4.0	2
128	Unsupervised selection of training plots and trees for tree species classification. , 2013, , .		0
129	Prediction of Forest Attributes with Multispectral Lidar Data. , 2018, , .		0
130	<i>In-situ</i> calibration of stand level merchantable and sawlog volumes using cut-to-length harvester measurements and airborne laser scanning data. Forestry, 2022, 95, 105-117.	2.3	0