

Ole Martin Bollands

List of Publications by Year in descending order

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79
papers

4,324
citations

126907

33
h-index

110387

64
g-index

81
all docs

81
docs citations

81
times ranked

3178
citing authors

#	ARTICLE	IF	CITATIONS
1	Laser scanning of forest resources: the nordic experience. Scandinavian Journal of Forest Research, 2004, 19, 482-499.	1.4	386
2	Tree Species Classification in Boreal Forests With Hyperspectral Data. IEEE Transactions on Geoscience and Remote Sensing, 2013, 51, 2632-2645.	6.3	278
3	Single Tree Segmentation Using Airborne Laser Scanner Data in a Structurally Heterogeneous Spruce Forest. Photogrammetric Engineering and Remote Sensing, 2006, 72, 1369-1378.	0.6	222
4	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
5	Classifying species of individual trees by intensity and structure features derived from airborne laser scanner data. Remote Sensing of Environment, 2009, 113, 1163-1174.	11.0	206
6	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
7	Estimating forest growth using canopy metrics derived from airborne laser scanner data. Remote Sensing of Environment, 2005, 96, 453-465.	11.0	153
8	Allometric models for prediction of above- and belowground biomass of trees in the miombo woodlands of Tanzania. Forest Ecology and Management, 2013, 310, 87-101.	3.2	153
9	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
10	Comparing regression methods in estimation of biophysical properties of forest stands from two different inventories using laser scanner data. Remote Sensing of Environment, 2005, 94, 541-553.	11.0	142
11	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
12	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 "activity data". Remote Sensing of Environment, 2013, 128, 299-314.	11.0	106
13	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
14	Comparison of precision of biomass estimates in regional field sample surveys and airborne LiDAR-assisted surveys in Hedmark County, Norway. Remote Sensing of Environment, 2013, 130, 108-120.	11.0	88
15	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
16	Mapping and estimating forest area and aboveground biomass in miombo woodlands in Tanzania using data from airborne laser scanning, TanDEM-X, RapidEye, and global forest maps: A comparison of estimated precision. Remote Sensing of Environment, 2016, 175, 282-300.	11.0	77
17	Assessing the accuracy of regional LiDAR-based biomass estimation using a simulation approach. Remote Sensing of Environment, 2012, 123, 579-592.	11.0	75
18	Predicting the growth of stands of trees of mixed species and size: A matrix model for Norway. Scandinavian Journal of Forest Research, 2008, 23, 167-178.	1.4	74

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19	Effects of different sensors and leaf-on and leaf-off canopy conditions on echo distributions and individual tree properties derived from airborne laser scanning. <i>Remote Sensing of Environment</i> , 2010, 114, 1445-1461.	11.0	74
20	Indirect and direct estimation of forest biomass change using forest inventory and airborne laser scanning data. <i>Remote Sensing of Environment</i> , 2015, 164, 36-42.	11.0	74
21	Characterizing forest species composition using multiple remote sensing data sources and inventory approaches. <i>Scandinavian Journal of Forest Research</i> , 2013, 28, 677-688.	1.4	65
22	Modeling Aboveground Biomass in Dense Tropical Submontane Rainforest Using Airborne Laser Scanner Data. <i>Remote Sensing</i> , 2015, 7, 788-807.	4.0	65
23	Detection of biomass change in a Norwegian mountain forest area using small footprint airborne laser scanner data. <i>Statistical Methods and Applications</i> , 2013, 22, 113-129.	1.2	61
24	Effects of field plot size on prediction accuracy of aboveground biomass in airborne laser scanning-assisted inventories in tropical rain forests of Tanzania. <i>Carbon Balance and Management</i> , 2015, 10, 10.	3.2	59
25	A simulation approach for accuracy assessment of two-phase post-stratified estimation in large-area LiDAR biomass surveys. <i>Remote Sensing of Environment</i> , 2013, 133, 210-224.	11.0	53
26	Mapping and estimating the total living biomass and carbon in low-biomass woodlands using Landsat 8 CDR data. <i>Carbon Balance and Management</i> , 2016, 11, 13.	3.2	53
27	Estimating percentile-based diameter distributions in uneven-sized Norway spruce stands using airborne laser scanner data. <i>Scandinavian Journal of Forest Research</i> , 2007, 22, 33-47.	1.4	52
28	The effects of field plot size on model-assisted estimation of aboveground biomass change using multitemporal interferometric SAR and airborne laser scanning data. <i>Remote Sensing of Environment</i> , 2015, 168, 252-264.	11.0	49
29	Large-scale estimation of change in aboveground biomass in miombo woodlands using airborne laser scanning and national forest inventory data. <i>Remote Sensing of Environment</i> , 2017, 188, 106-117.	11.0	46
30	Aboveground biomass models for trees and shrubs of exclosures in the drylands of Tigray, northern Ethiopia. <i>Journal of Arid Environments</i> , 2018, 156, 9-18.	2.4	39
31	Comparing the accuracies of forest attributes predicted from airborne laser scanning and digital aerial photogrammetry in operational forest inventories. <i>Remote Sensing of Environment</i> , 2019, 226, 26-37.	11.0	39
32	Deriving forest monitoring variables from X-band InSAR SRTM height. <i>Canadian Journal of Remote Sensing</i> , 2010, 36, 68-79.	2.4	36
33	Effects of UAV Image Resolution, Camera Type, and Image Overlap on Accuracy of Biomass Predictions in a Tropical Woodland. <i>Remote Sensing</i> , 2019, 11, 948.	4.0	36
34	Detection of small single trees in the forest-tundra ecotone using height values from airborne laser scanning. <i>Canadian Journal of Remote Sensing</i> , 2011, 37, 264-274.	2.4	35
35	Effects of Pulse Density on Digital Terrain Models and Canopy Metrics Using Airborne Laser Scanning in a Tropical Rainforest. <i>Remote Sensing</i> , 2015, 7, 8453-8468.	4.0	35
36	Optimizing management regimes for carbon storage and other benefits in uneven-aged stands dominated by Norway spruce, with a derivation of the economic supply of carbon storage. <i>Scandinavian Journal of Forest Research</i> , 2012, 27, 460-473.	1.4	34

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37	Direct and indirect site index determination for Norway spruce and Scots pine using bitemporal airborne laser scanner data. <i>Forest Ecology and Management</i> , 2018, 428, 104-114.	3.2	33
38	Predicting and mapping site index in operational forest inventories using bitemporal airborne laser scanner data. <i>Forest Ecology and Management</i> , 2020, 457, 117768.	3.2	33
39	Above- and belowground tree biomass models for three mangrove species in Tanzania: a nonlinear mixed effects modelling approach. <i>Annals of Forest Science</i> , 2016, 73, 353-369.	2.0	27
40	Large-scale estimation of aboveground biomass in miombo woodlands using airborne laser scanning and national forest inventory data. <i>Remote Sensing of Environment</i> , 2016, 186, 626-636.	11.0	26
41	Weibull models for single-tree increment of Norway spruce, Scots pine, birch and other broadleaves in Norway. <i>Scandinavian Journal of Forest Research</i> , 2009, 24, 54-66.	1.4	25
42	Deriving individual tree competition indices from airborne laser scanning. <i>Forest Ecology and Management</i> , 2012, 280, 150-165.	3.2	25
43	Individual tree crown approach for predicting site index in boreal forests using airborne laser scanning and hyperspectral data. <i>International Journal of Applied Earth Observation and Geoinformation</i> , 2017, 60, 72-82.	2.8	25
44	Modelling aboveground forest biomass using airborne laser scanner data in the miombo woodlands of Tanzania. <i>Carbon Balance and Management</i> , 2015, 10, 28.	3.2	24
45	Measures of spatial forest structure derived from airborne laser data are associated with natural regeneration patterns in an uneven-aged spruce forest. <i>Forest Ecology and Management</i> , 2008, 255, 953-961.	3.2	22
46	Monitoring forest carbon in a Tanzanian woodland using interferometric SAR: a novel methodology for REDD+. <i>Carbon Balance and Management</i> , 2015, 10, 14.	3.2	21
47	Classifications of Forest Change by Using Bitemporal Airborne Laser Scanner Data. <i>Remote Sensing</i> , 2019, 11, 2145.	4.0	18
48	Modeling and predicting aboveground biomass change in young forest using multi-temporal airborne laser scanner data. <i>Scandinavian Journal of Forest Research</i> , 0, , 1-12.	1.4	16
49	Simulation-based assessment of sampling strategies for large-area biomass estimation using wall-to-wall and partial coverage airborne laser scanning surveys. <i>Remote Sensing of Environment</i> , 2016, 176, 328-340.	11.0	16
50	Estimation of biomass change in montane forests in Norway along a 1200 km latitudinal gradient using airborne laser scanning: a comparison of direct and indirect prediction of change under a model-based inferential approach. <i>Scandinavian Journal of Forest Research</i> , 2018, 33, 155-165.	1.4	16
51	Estimating potential logging residues in a boreal forest by airborne laser scanning. <i>Biomass and Bioenergy</i> , 2012, 36, 356-365.	5.7	15
52	Functions for estimating aboveground biomass of birch in Norway. <i>Scandinavian Journal of Forest Research</i> , 2014, 29, 565-578.	1.4	15
53	Post-stratified change estimation for large-area forest biomass using repeated ALS strip sampling. <i>Canadian Journal of Forest Research</i> , 2017, 47, 839-847.	1.7	14
54	Classifying tree and nontree echoes from airborne laser scanning in the forest-tundra ecotone. <i>Canadian Journal of Remote Sensing</i> , 2013, 38, 655-666.	2.4	13

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55	Effects of terrain slope and aspect on the error of ALS-based predictions of forest attributes. <i>Forestry</i> , 2018, 91, 225-237.	2.3	13
56	Multi-sensor forest vegetation height mapping methods for Tanzania. <i>European Journal of Remote Sensing</i> , 2018, 51, 587-606.	3.5	13
57	Relationships between single-tree mountain birch summertime albedo and vegetation properties. <i>Agricultural and Forest Meteorology</i> , 2021, 307, 108470.	4.8	12
58	On the evaluation of competition indices – The problem of overlapping samples. <i>Forest Ecology and Management</i> , 2013, 310, 120-133.	3.2	11
59	Models for predicting above-ground biomass of <i>Betula pubescens</i> spp. in mountain areas of southern Norway. <i>Scandinavian Journal of Forest Research</i> , 2009, 24, 318-332.	1.4	10
60	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
61	Automatic Detection of Small Single Trees in the Forest-Tundra Ecotone Using Airborne Laser Scanning. <i>Remote Sensing</i> , 2014, 6, 10152-10170.	4.0	10
62	Modelling above Ground Biomass in Tanzanian Miombo Woodlands Using TanDEM-X WorldDEM and Field Data. <i>Remote Sensing</i> , 2017, 9, 984.	4.0	10
63	Comparing Empirical and Semi-Empirical Approaches to Forest Biomass Modelling in Different Biomes Using Airborne Laser Scanner Data. <i>Forests</i> , 2017, 8, 170.	2.1	10
64	Monitoring small pioneer trees in the forest-tundra ecotone: using multi-temporal airborne laser scanning data to model height growth. <i>Environmental Monitoring and Assessment</i> , 2018, 190, 12.	2.7	10
65	The relative role of climate and herbivory in driving treeline dynamics along a latitudinal gradient. <i>Journal of Vegetation Science</i> , 2020, 31, 392-402.	2.2	10
66	Assessing Dead Wood by Airborne Laser Scanning. <i>Managing Forest Ecosystems</i> , 2014, , 375-395.	0.9	10
67	Variation in wood basic density within and between tree species and site conditions of exclosures in Tigray, northern Ethiopia. <i>Trees - Structure and Function</i> , 2018, 32, 967-983.	1.9	9
68	Modelling Site Index in Forest Stands Using Airborne Hyperspectral Imagery and Bi-Temporal Laser Scanner Data. <i>Remote Sensing</i> , 2019, 11, 1020.	4.0	9
69	Modeling and Estimating Change. <i>Managing Forest Ecosystems</i> , 2014, , 293-313.	0.9	8
70	Improving Classification of Airborne Laser Scanning Echoes in the Forest-Tundra Ecotone Using Geostatistical and Statistical Measures. <i>Remote Sensing</i> , 2014, 6, 4582-4599.	4.0	7
71	A Model-Dependent Method for Monitoring Subtle Changes in Vegetation Height in the Boreal-Alpine Ecotone Using Bi-Temporal, Three Dimensional Point Data from Airborne Laser Scanning. <i>Remote Sensing</i> , 2019, 11, 1804.	4.0	7
72	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. <i>Scandinavian Journal of Forest Research</i> , 2021, 36, 55-67.	1.4	6

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73	Land cover classification of treeline ecotones along a 1100 km latitudinal transect using spectral and three-dimensional information from UAV-based aerial imagery. <i>Remote Sensing in Ecology and Conservation</i> , 2022, 8, 536-550.	4.3	6
74	Use of local and global maps of forest canopy height and aboveground biomass to enhance local estimates of biomass in miombo woodlands in Tanzania. <i>International Journal of Applied Earth Observation and Geoinformation</i> , 2020, 89, 102109.	2.8	5
75	Airborne laser scanning reveals increased growth and complexity of boreal forest canopies across a network of ungulate exclosures in Norway. <i>Remote Sensing in Ecology and Conservation</i> , 2022, 8, 5-17.	4.3	5
76	On the Potential of Sequential and Nonsequential Regression Models for Sentinel-1-Based Biomass Prediction in Tanzanian Miombo Forests. <i>IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing</i> , 2022, 15, 4612-4639.	4.9	5
77	Generation of Lidar-Predicted Forest Biomass Maps from Radar Backscatter with Conditional Generative Adversarial Networks. , 2020, , .		4
78	Identifying old Norway spruce and Scots pine trees by morphological traits and site characteristics. <i>Scandinavian Journal of Forest Research</i> , 0, , 1-13.	1.4	3
79	Legacy effects of herbivory on treeline dynamics along an elevational gradient. <i>Oecologia</i> , 2022, 198, 801-814.	2.0	3