Alexis Achim

List of Publications by Year
in descending order

71 papers	1,788 citations	304743 22 h-index	302126 39 g-index
71 all docs	71 docs citations	71 times ranked	1684 citing authors

#	Article	IF	Citations
1	lidR: An R package for analysis of Airborne Laser Scanning (ALS) data. Remote Sensing of Environment, 2020, 251, 112061.	11.0	366
2	The stability of different silvicultural systems: a wind-tunnel investigation. Forestry, 2005, 78, 471-484.	2.3	74
3	Does steep terrain influence tree stability? A field investigation. Canadian Journal of Forest Research, 2005, 35, 2360-2367.	1.7	69
4	Models for predicting wood density variation in Scots pine. Forestry, 2014, 87, 449-458.	2.3	69
5	Removing bias from LiDAR-based estimates of canopy height: Accounting for the effects of pulse density and footprint size. Remote Sensing of Environment, 2017, 198, 1-16.	11.0	69
6	Genetic Improvement of White Spruce Mechanical Wood Traitsâ€"Early Screening by Means of Acoustic Velocity. Forests, 2013, 4, 575-594.	2.1	63
7	Models for predicting microfibril angle variation in Scots pine. Annals of Forest Science, 2013, 70, 209-218.	2.0	50
8	Effect of process parameters and raw material characteristics on physical and mechanical properties of wood pellets made from sugar maple particles. Biomass and Bioenergy, 2015, 80, 338-349.	5.7	48
9	Effects of early re-spacing on the physical and mechanical properties of Sitka spruce structural timber. Forest Ecology and Management, 2009, 258, 1174-1180.	3.2	47
10	Effect of Tree Spacing on Tree Level Volume Growth, Morphology, and Wood Properties in a 25-Year-Old Pinus banksiana Plantation in the Boreal Forest of Quebec. Forests, 2016, 7, 276.	2.1	46
11	Quantifying the influence of live crown ratio on the mechanical properties of clear wood. Forestry, 2013, 86, 361-369.	2.3	45
12	Improving tree selection for partial cutting through joint probability modelling of tree vigor and quality. Canadian Journal of Forest Research, 2013, 43, 288-298.	1.7	41
13	Using a Standing-Tree Acoustic Tool to Identify Forest Stands for the Production of Mechanically-Graded Lumber. Sensors, 2013, 13, 3394-3408.	3.8	38
14	Influence of early re-spacing on Sitka spruce branch structure. Annals of Forest Science, 2012, 69, 93-104.	2.0	32
15	Untapped volume of surplus forest growth as feedstock for bioenergy. Biomass and Bioenergy, 2019, 120, 376-386.	5.7	31
16	Changes in root morphology after precommercial thinning in balsam fir stands. Canadian Journal of Forest Research, 2003, 33, 2452-2459.	1.7	29
17	Composition of ethanolic extracts of wood and bark from Acer saccharum and Betula alleghaniensis trees of different vigor classes. Industrial Crops and Products, 2013, 41, 179-187.	5.2	28
18	Radial trends in black spruce wood density can show an age- and growth-related decline. Annals of Forest Science, 2014, 71, 603-615.	2.0	28

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19	Integrating standing value estimations into tree marking guidelines to meet wood supply objectives. Canadian Journal of Forest Research, 2014, 44, 750-759.	1.7	27
20	Modelling the anchorage of shallow-rooted trees. Forestry, 2009, 82, 273-284.	2.3	26
21	Black spruce trees from fire-origin stands have higher wood mechanical properties than those from older, irregular stands. Canadian Journal of Forest Research, 2014, 44, 118-127.	1.7	23
22	A financial analysis of the potential of dead trees from the boreal forest of eastern Canada to serve as feedstock for wood pellet export. Applied Energy, 2017, 198, 410-425.	10.1	23
23	Relating mechanical strength at the stem level to values obtained from defect-free wood samples. Trees - Structure and Function, 2010, 24, 1127-1135.	1.9	22
24	Regional variation in the proportion of red heartwood in sugar maple and yellow birch. Canadian Journal of Forest Research, 2013, 43, 278-287.	1.7	22
25	A dendrochronological reconstruction of sugar maple growth and mortality dynamics in partially cut northern hardwood forests. Forest Ecology and Management, 2019, 437, 17-26.	3.2	22
26	Comparison of carbon balance and climate change mitigation potential of forest management strategies in the boreal forest of Quebec (Canada). Forestry, 2019, 92, 264-277.	2.3	22
27	Within-tree patterns of wood stiffness for white spruce (Picea glauca) and trembling aspen (Populus tremuloides). Canadian Journal of Forest Research, 2014, 44, 162-171.	1.7	21
28	Dynamics of detrital carbon pools following harvesting of a humid eastern Canadian balsam fir boreal forest. Forest Ecology and Management, 2018, 430, 33-42.	3.2	21
29	A mathematical framework to describe the effect of beam incidence angle on metrics derived from airborne LiDAR: The case of forest canopies approaching turbid medium behaviour. Remote Sensing of Environment, 2018, 209, 824-834.	11.0	20
30	Using Acoustic Sensors to Improve the Efficiency of the Forest Value Chain in Canada: A Case Study with Laminated Veneer Lumber. Sensors, 2011, 11, 5716-5728.	3.8	19
31	Functional response of coniferous trees and stands to commercial thinning in eastern Canada. Forest Ecology and Management, 2017, 384, 6-16.	3.2	19
32	Wood Degradation after Windthrow in a Northern Environment. Forest Products Journal, 2010, 60, 200-206.	0.4	19
33	Lumber recovery and value of dead and sound black spruce trees grown in the North Shore region of QuÃ©bec. Annals of Forest Science, 2012, 69, 603-615.	2.0	18
34	Long-term tree and stand growth dynamics after thinning of various intensities in a temperate mixed forest. Forest Ecology and Management, 2020, 473, 118311.	3.2	17
35	Modelling stem selection in northern hardwood stands: assessing the effects of tree vigour and spatial correlations using a copula approach. Forestry, 2014, 87, 607-617.	2.3	16
36	Models for Predicting Clearwood Mechanical Properties of Scots Pine. Forest Science, 2016, 62, 403-413.	1.0	16

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37	StatSAW: modelling lumber product assortment using zero-inflated Poisson regression. Canadian Journal of Forest Research, 2014, 44, 638-647.	1.7	14
38	Partial harvesting in boreal mixedwoods: A case for planned heterogeneity in industrial silvicultural prescriptions. Forest Ecology and Management, 2015, 358, 291-302.	3.2	14
39	Detection of red heartwood in paper birch (Betula papyrifera) using external stem characteristics. Canadian Journal of Forest Research, 2011, 41, 1491-1499.	1.7	13
40	Growth and wood quality of black spruce and balsam fir following careful logging around small merchantable stems (CLASS) in the boreal forest of Quebec, Canada. Forestry, 2018, 91, 271-282.	2.3	13
41	Understanding the interactions between wind and trees: an introduction to the IUFRO 8th Wind and Trees Conference (2017). Forestry, 2019, 92, 375-380.	2.3	13
42	An accumulation of climatic stress events has led to years of reduced growth for sugar maple in southern Quebec, Canada. Ecosphere, 2020, 11, e03183.	2.2	13
43	Glued-laminated timber from northern hardwoods: Effect of finger-joint profile on lamellae tensile strength. Construction and Building Materials, 2021, 271, 121591.	7.2	11
44	Models of knot and stem development in black spruce trees indicate a shift in allocation priority to branches when growth is limited. PeerJ, 2015, 3, e873.	2.0	11
45	Pressurized hot water treatment of sugar maple and yellow birch wood particles for high quality fuel pellet production. Biomass and Bioenergy, 2017, 98, 206-213.	5.7	10
46	Effects of early respacing on the density and microfibril angle of Sitka spruce wood. Forestry, 2018, 91, 307-319.	2.3	10
47	Wood quality of black spruce and balsam fir trees defoliated by spruce budworm: A case study in the boreal forest of Quebec, Canada. Forest Ecology and Management, 2019, 437, 201-210.	3.2	10
48	Use of northern hardwoods in glued-laminated timber: a study of bondline shear strength and resistance to moisture. European Journal of Wood and Wood Products, 2020, 78, 891-903.	2.9	10
49	Branch models for white spruce (Picea glauca (Moench) Voss) in naturally regenerated stands. Forest Ecology and Management, 2014, 325, 74-89.	3.2	9
50	Influence of shifts over an 80-year period in forest composition on soil properties. Plant and Soil, 2018, 433, 111-125.	3.7	9
51	Assessing the potential impact of a biorefinery product from sawmill residues on the profitability of a hardwood value chain. Canadian Journal of Forest Research, 2018, 48, 857-868.	1.7	8
52	Wood Density-Climate Relationships Are Mediated by Dominance Class in Black Spruce (Picea mariana) Tj ETQq0 0 0 rgBT /Overlock 10	2.1	7
53	Increased levels of harvest may favour sugar maple regeneration over American beech in northern hardwoods. Forest Ecology and Management, 2021, 499, 119607.	3.2	7
54	Large-Scale Variations in Lumber Value Recovery of Yellow Birch and Sugar Maple in Quebec, Canada. PLoS ONE, 2015, 10, e0136674.	2.5	6

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55	Relationship between ethanolic extracts of yellow birch and tree characteristics. Industrial Crops and Products, 2016, 94, 1-8.	5.2	6
56	Broadâ€scale wood degradation dynamics in the face of climate change: A metaâ€analysis. GCB Bioenergy, 2022, 14, 941-958.	5.6	6
57	Characterizing wood densityâ€“climate relationships along the stem in black spruce (Picea mariana) Tj ETQq1 1 0.784314 rgBT /Overlock 2019, 92, 357-374.	2.3	5
58	Estimation of individual knot volumes by mixed-effects modelling. Canadian Journal of Forest Research, 2020, 50, 81-88.	1.7	5
59	Relevance of stem and crown defects to estimate tree vigour in northern hardwood forests. Forestry, 2020, 93, 630-640.	2.3	5
60	Deciphering the black spruce response to climate variation across eastern Canada using a meta-analysis approach. Forest Ecology and Management, 2022, 520, 120375.	3.2	5
61	Adjusting harvest rules for red oak in selection cuts of Canadian northern hardwood forests. Forestry, 2016, 89, 402-411.	2.3	4
62	Comparison of wood density in roots and stems of black spruce before and after commercial thinning. Forest Ecology and Management, 2018, 408, 94-102.	3.2	4
63	Strength grading of northern hardwood species for structural engineered wood products: Identification of the relevant indicating properties. BioResources, 2020, 15, 8813-8832.	1.0	3
64	Effect of thinning on the relationship between mean ring density and climate in black spruce (Picea) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	2.3	2
65	Primary and Secondary Branch Growth in Black Spruce and Balsam Fir after Careful Logging around Small Merchantable Stems (CLASS). Forests, 2019, 10, 500.	2.1	2
66	Fire as a driver of wood mechanical traits in the boreal forest. Forest Ecology and Management, 2020, 476, 118460.	3.2	2
67	Classification of high-voltage power line structures in low density ALS data acquired over broad non-urban areas. PeerJ Computer Science, 2021, 7, e672.	4.5	2
68	Assessing the Potential Stem Growth and Quality of Yellow Birch Prior to Restoration: A Case Study in Eastern Canada. Forests, 2013, 4, 766-785.	2.1	1
69	Black spruce trees from uneven-aged, old-growth stands produce more dimensionally stable wood than trees from fire-origin even-aged stands. Wood Science and Technology, 2021, 55, 1457-1483.	3.2	1
70	Predicting Lumber Grade Occurrence and Volume in Sugar Maple and Yellow Birch Logs. Forest Science, 0, , .	1.0	1
71	ProgrÃ¨s dans lâ€™application de la tÃ©lÃ©dÃ©tection pour les besoins en matiÃ¨re dâ€™information sur les forÃªts au Canada : leÃ§ons tirÃ©es dâ€™une collaboration nationale dâ€™intervenants universitaires, industriels et gouvernementaux. Forestry Chronicle, 2021, 97, 127-147.	0.6	0