GROWTH AND YIELD
INNOVATIONS CONFERENCE

June 18-21, 2023 Canmore, Alberta

Conference Event Overview

Time	Activity	Location
Sunday, June 18		
5:00 pm – 8:00 pm	Registration	Concourse
5:00 pm – 10:00 pm	Icebreaker (Cash Bar)	Ladyslipper Arnica Room
Monday June 19		
7:00 am – 8:00 am	Registration	Concourse
7:00 am – 7:45 am	Hot Breakfast Buffet	Ladyslipper Arnica Room
8:00 am – 4:30 pm	Conference Events	Ladyslipper Arnica Room, Orchid Room
6:30 pm – 9:30 pm	Banquet Dinner (Cash Bar)	Ladyslipper Arnica Room
Tuesday June 20		
7:00 am – 7:45 am	Hot Breakfast Buffet	Ladyslipper Arnica Room
8:00 am – 4:15 pm	Conference Events	Ladyslipper Arnica Room, Orchid Room
Wednesday June 21 - Optional Field Tour		
7:00 am – 7:45 am	Continental Breakfast Buffet	Crocus Room
7:45 am – 8:00 am	Health and Safety, Forecast	Crocus Room
8:00 am – 8:15 am	Bus Loading and Departure	Muster Point
8:15 am – 4:45 pm	Field Tour	Kananaskis and Surrounds

Monday, June 19 – Day 1 Conference

Time	Ladyslipper Arnica	Orchid
8:00-8:30	**Introduction and Housekeeping** Katrina Froese	
8:30-9:30	**Keynote Address: Can we meet increasing demands for forest growth and yield information under increased scope, changing inventory technologies, and uncertain climate and disturbance regimes?** Dr. Valerie LeMay, RPF, Professor, Forest Biometrics and Forest Measurements, University of British Columbia	
9:30-10:00	**Tablet app for visualizing individual tree parameters with person-carried laser scanning (PLS) in forest inventory** Andreas Tockner, Dipl.-Ing., PhD Candidate, Institute of Forest Growth, University of Natural Resources and Life Sciences, Vienna	**Alternative subsampling designs derived from aerial and terrestrial remote sensing technology** Dr. John Kershaw, Professor, Forest Mensuration, University of New Brunswick
10:00-10:30	**Health Break**	
10:30-11:00	**Species identification from LiDAR** David Campbell, MScF, RPF, ForCorp Solutions Inc.	**Generalizing DBH and height prediction in coast Douglas-fir and red alder** Dr. Bogdan Strimbu, Associate Professor, Oregon State University
11:00-11:30	**Modeling aboveground carbon dynamics under different silvicultural treatments** Catherine Carlisle, Master of Forestry Candidate, Oregon State University	**Climate-sensitive mortality models in Ontario, Canada** Dr. José Riofrío, Department of Forest Resources Management, University of British Columbia
11:30-12:00	**Carbon budget of loblolly pine plantations in the southern US** Dr. Dehai Zhao, Senior Research Scientist, Warnell School of Forestry and Natural Resources, University of Georgia	**Census growth and yield models using only LiDAR and EFI data - no field data required** John Nash, Forest Ecologist, GreenLink Forestry Inc.
12:00-1:00	**Lunch and Group Photo**	
1:00-1:30	**5-Minute Lightning Talks *** - Noel Daugherty, U of Idaho - Surabhi Lukose, U of Alberta - Liam Gilson, U of BC - Dr. Mostarin Ara, U of Alberta - Yung-Han Hsu, U of New Brunswick - Christina Howard, U of BC - Benjamin Strelkov, U of Alberta - Dr. Sarita Bassil, U of Alberta	**Modelling tree-level western hemlock (*Tsuga heterophylla* (Raf.) Sarg.) responses to fertilization** Dr. Woongsoon Jang, Research Scientist, BC Ministry of Forests
1:30-2:00		**Tree list growth and yield models for planted loblolly pine** Dr. Corey Green, Assistant Professor of Forest Biometrics, Virginia Tech
2:00-2:30	**Why you should NOT use site index** Greg Johnson, Greg Johnson Biometrics LLC and Dave Hamlin, Mt. Hood Biometrics LLC	**Estimating changes in forest attributes with 3D remote sensing** Dr. Piotr Tompalski, Research Scientist, Pacific Forestry Centre, Canadian Forest Service
2:30-3:00	**Health Break**	
3:00-4:00	**Keynote Address: Incorporating regeneration dynamics and reforestation treatment effects into growth and yield models** Dr. Dick Dempster, Forest Growth Organization of Western Canada (Retired)	
4:00-4:30	**Day 1 Meeting Wrap Up** Katrina Froese	

Tuesday, June 20 – Day 2 Conference

Time	Ladyslipper Arnica	Orchid
8:00-9:00	**Keynote Address: A paradigm shift in empirical growth and yield modelling: towards climate-sensitive models and large area predictions** Dr. Mathieu Fortin, Research Scientist, Canadian Wood Fibre Centre, Canadian Forest Service	
9:00-9:30	**Taper modeling for various genetic origins of Scots pine from Poland** Dr. hab Karol Bronisz, Warsaw University of Life Sciences, Institute of Forest Sciences, Department of Forest Management Planning, Dendrometry and Forest Economics	**Growth response to pre-commercial thinning of lodgepole pine is short-term but the effects on size distribution persist for decades** Dr. Shes Kanta Bhandari, Postdoctoral Fellow, Department of Renewable Resources, University of Alberta
9:30-10:00	**Assessing uncertainty in k-most similar neighbor imputations for sustainable forest management: a conformal inference approach** Dr. Liviu Ene, Researcher, Value Chains Program, Forestry Research Institute of Sweden	**Application results of handheld mobile LiDAR study in Turkey** Ergin Çankaya, PhD Candidate, Forest Growth & Yield Lab, University of Alberta
10:00-10:30	**Health Break**	
10:30-11:00	**Ecological forecasting of forest biomass with tree-ring and forest inventory networks** Dr. Kelly Heilman, Postdoctoral Research Specialist, ORAU/USDA Forest Service	**A stand-level evaluation of FVS growth projections for a LiDAR forest inventory** Dr. Jacob Strunk, US Forest Service and Dr. Peter Gould, Mason Bruce & Girard
11:00-11:30	**Revisiting stand density development of loblolly pine plantations in western gulf region, USA** Dr. Yuhui Weng, Associate Professor, Stephen F. Austin State University	**Commercial thinning and nitrogen fertilization increase merchantability in lodgepole pine: 20-year result** Apsana Kafle, MSc Candidate, Department of Renewable Resources, University of Alberta
11:30-12:00	**The Tree and Stand Simulator (TASS): still providing understanding after 6 decades** Jeff Stone, Stand Development Modelling Research Scientist, British Columbia Ministry of Forests	**Using machine learning and contemporary computational statistical techniques to improve forest management decisions** Dr. Cristian Montes, Associate Professor, Warnell School of Forestry and Natural Resources, University of Georgia
12:00-1:15	**Lunch**	12:45 Western Mens Business Meeting
1:15-1:45	**Climatic sensitivities derived from tree rings improve predictions of the Forest Vegetation Simulator growth and yield model** Courtney Giebink, Oak Ridge Associated Universities; USDA Forest Service, Northern Research Station, Forest Inventory and Analysis	**Machine learning approaches for estimating forest stand height using airborne LiDAR data in New Brunswick forests** Elham Behroozi, PhD Candidate, Faculty of Forestry and Environmental Management, University of New Brunswick
1:45-2:15	**Stand structure classification and the indexing of diameter and height distributions** Dr. Ian S. Moss, RPF, Forest Inventory & Growth and Yield Consultant, Forestree Dynamics Ltd.	**Putting stereo glasses on data scientists: EFI to AVI** Kat Gunion, Senior Forest Analyst, Forsite Consultants Ltd.
2:15-2:45	**Health Break**	
2:45-3:45	**Keynote Address: The digital forest: opportunities for improved forest management through improved information** Dr. Rasmus Astrup, Head of Research, Division of Forest and Forest Resources, Norwegian Institute of Bioeconomy Research	
3:45-4:05	**Day 2 Meeting Wrap Up** Paul LeBlanc	
4:05-4:15	**Best Student Awards & Adjourn** Katrina Froese	

Lightning Talk Speakers and Titles

Speaker	Title
Noel Daugherty, MSc Candidate, Forest Biometrics, University of Idaho	Defining and identifying site trees from LiDAR
Surabhi Lukose, MSc Candidate, University of Alberta	Mixing tree species along with density management to reduce drought susceptibility in coastal plantation forests of British Columbia
Liam Gilson, PhD Candidate, University of British Columbia	Causality and forest modelling: causal insights into predictive methods
Dr. Mostarin Ara, Postdoctoral Research Scientist, Forest Growth & Yield Lab, University of Alberta	Growth and yield models of Alberta: Can they predict commercial thinning response?
Yung-Han Hsu, PhD Candidate, University of New Brunswick	Modeling complexity in long-term stand dynamics using an imputation/copula individual tree growth model
Christina Howard, PhD Candidate, University of British Columbia	Climate sensitive mortality modelling of Québec tree species
Benjamin Strelkov, MSc Candidate, Department of Renewable Resources, University of Alberta	Effects of vegetation management on Leaf Area Index (LAI) and drought tolerance in a regenerating boreal mixedwood
Dr. Sarita Bassil, Postdoctoral Research Scientist, Forest Growth & Yield Lab, University of Alberta	Opportunities for long-term monitoring of mountain pine beetle effects using PSPs in Alberta

Poster Presentations

Presenter	Title
Jéssica Chaves Cardoso, PhD Candidate, Department of Renewable Resources, University of Alberta, Forest Biology And Management	Effects of density and site quality on growth resilience in aspen-spruce mixtures and pure stands using dendrometers
Mihai Voicu, Forest Research Officer, Northern Forestry Centre, Canadian Forest Service, Natural Resources Canada	New volume-to-biomass equations for small black spruce trees
Francis Scaria, MSc Student, Department of Renewable Resources, University of Alberta	Effects of stand age at pre-commercial thinning on merchantability and western gall rust infections in Lodgepole pine
Ethan Ramsfield, MSc Student, Department of Renewable Resources, University of Alberta	Silviculture intensification and structural diversity in boreal mixedwoods