



SILVI LASER 2025

QUEBEC CITY

CONFERENCE
PROGRAM

BIENVENUE, WELCOME TO SILVILASER 2025

Bienvenue! Welcome to SilviLaser 2025 in the heart of historic Quebec City.

On behalf of the entire organizing committee and our host, Université Laval, we are truly honored to welcome you to the 2025 edition of the conference. Quebec, with its deep forestry heritage and vast boreal landscapes, provides a fitting and inspiring backdrop for the critical work we are all gathered to discuss.

SilviLaser has always been more than just a scientific meeting; it is a global community. It is the vital forum where emerging researchers connect with seasoned experts, where new ideas are sparked, and where the future of our discipline is collectively shaped.

Over the next few days, we encourage you to engage in vibrant discussion, challenge assumptions, reconnect with old friends, and forge the new collaborations that will define the next wave of innovation in forest remote sensing.

This conference is built upon your contributions. We have a fantastic program ahead, but the true success of SilviLaser 2025 will be measured by the connections you make and the shared passion you ignite.

Enjoy the science, the community, and the unique *joie de vivre* of Quebec City!

ALEXIS ACHIM
Host
Université Laval

NICHOLAS COOPS
Co-host
University of British Columbia

MONDAY
SEPTEMBER 29

29

8h00	Registration + Morning coffee	FOYER
9h00	Workshop 1 Ground-based LiDAR for precision forestry and national forest inventories Martin Mokros , University College	202
	Workshop 2 The interagency ecosystem LiDAR monitoring program - Automated TLS forestry and structural ecology processing and modeling Scott Pokswinski , New Mexico Consortium	203
	Workshop 3 ALS processing for forest inventory using LAStools and lidR Liam Irwin , University of British Columbia	204
10h15	Coffee break	FOYER
10h45	Workshops 1-3 continue	
12h00	Lunch (note that Monday lunch is not provided)	
13h00	Workshop 4 https://github.com/MapsHD/HDMMapping - opensource project for large-scale 3D mapping: precise forestry use case Janusz Bedkowski , IPPT PAN	202
	Workshop 5 Automating forest plotting with RIEGL VZ-600i: Static & kinematic LiDAR for efficient forestry applications Bao Ha , Riegl Canada	203
	Workshop 6 Introducing web-based data open storage, data access and AI-based analysis with 3dtrees.earth & deadtrees.earth Kilian Gerberding , Universität Freiburg	204
14h15	Coffee break	FOYER
14h45	Workshops 4-6 continue	
16h00	Early Career Event	LOUIS-HÉBERT 668 GRANDE ALLÉE EST
16h00	Registration	FOYER
18h00	Icebreaker	FOYER

30

TUESDAY
SEPTEMBER 30

7h30 Registration + Morning coffee 200C

8h30 Opening address 200A

9h00 Keynote Speaker 200A
PIOTR TOMPALSKI, Research scientist, Canadian forest service
RETHINKING FOREST GROWTH IN THE LIDAR ERA

10h15 Coffee break 200C

Plenary Session 1 200A
GROWTH, PRODUCTIVITY, AND FOREST AGE ASSESSMENT
Co-chairs: Mikko Vastaranta & Kerstin Pierick10h45 Advanced techniques for predicting forest site index in mature stands using integrated remote sensing data
Faezeh Khalifeh Soltanian, NRES at University of Northern British Columbia
11h00 Climate-informed forest growth models derived from multi-temporal ALS data
José Riofrio, Integrated Remote Sensing Studio, Department of Forest Resources Management, University of British Columbia
11h15 Combining ALS-derived structural metrics and dendrochronological data to assess variations in growth trends in sugar maple stands at the northern limit of the species range
David Voyer, Département des Sciences du bois et de la forêt, Université Laval
11h30 Predicting forest age up to 250 years after last stand-replacing disturbance in eastern Canadian boreal forests with airborne LiDAR data
Maxence Martin, Institut de Recherche sur les Forêts, Université du Québec en Abitibi-Témiscamingue
11h45 Mapping of old-growth forests using airborne LiDAR data and satellite images
Janne Rätty, Natural Resources Institute Finland (Luke)

SILVILASER 2025 | TUESDAY SEPTEMBER 30

Plenary Session 2
AIRBORNE LIDAR-INFORMED FOREST INVENTORY

Co-chairs: Michael Wulder & Jesse Muhojoki

202

10h45 Importance of auxiliary data and training plots for predicting forest inventory variables
Timo P. Pitkänen, Natural Resources Institute Finland (Luke)
11h00 Modeling forest stand variability by means of vertical structure metrics from ALS
Florian Lippl, University of Graz, Institute for Geography and Regional Sciences
11h15 Optimizing enhanced forest inventory methods for area-based modeling of airborne laser scanning and calibration plot data in structurally-complex, mixed-species forests: Results from case studies in the managed forests of Maine, USA
Daniel Hayes, University of Maine
11h30 Estimating assortment volumes using accurately positioned harvester reference data: A comparison of airborne laser scanning, topographic, and forest stand data
Lennart Noordermeer, Division of Forest and Forest Resources, Norwegian Institute of Bioeconomy Research (NIBIO)
11h45 Development of an automated tool for measuring merchantable wood volume in coniferous plantations
Jean-François Prieur, Centre d'enseignement et de recherche en foresterie (CERFO)Plenary Session 3
DATA QUALITY, SIMULATION, AND METHOLOGICAL ADVANCES

Co-chairs: Piotr Wężyk & Eva Marino

203

10h45 LAI estimation using simulated full-waveform LiDAR data in a complex forest scene
Ramesh Bhatta, Rochester Institute of Technology
11h00 Leaf distribution inversion from TLS data with synthetic likelihood
Pietari Mönkkönen, Tampere University
11h15 Non-rigid registration of wind-affected terrestrial laser scanning point clouds of trees using deep learning
Hannah Weiser, DGeo Research Group, Interdisciplinary Centre of Scientific Computing (IWR), Heidelberg University
11h30 Towards more accurate digital surface models in forested landscapes: Simulating and merging satellite stereo and LiDAR
Ameni Mkaouar, GESTARII, University of Maryland Baltimore County, NASA Goddard Space Flight Center
11h45 Towards harmonized LiDAR data for high-resolution forest mapping
Emilie Vautier, IGN

12h00 Lunch Break 200C

Plenary Session 4

**MODELING FOREST GROWTH AND DYNAMICS
WITH MULTI-TEMPORAL LIDAR**

Co-chairs: Alexandre Morin-Bernard & Scott Pokswinski

200A

- 13h00 Development of a benchmarking dataset for characterizing forest growth and productivity in temperate mixedwood forests
Joanne White, Canadian Forest Service
- 13h15 Robustness of spatial and temporal models of forest growth using multi-temporal LiDAR
Carolina Villalobo, Institut de Recherche sur les Forêts, Université du Québec en Abitibi-Témiscamingue, Chaire en aménagement forestier durable UQAT-UQAM, Centre d'étude de la forêt
- 13h30 Evaluating the accuracy of MLS-ALS integration for 10-year tree attribute change detection
Daniella Tavi, Finnish Geospatial Research Institute
- 13h45 Advancing forest monitoring with multi-temporal terrestrial laser scanning: Current progress and future directions
Louise Terry, Ghent University

Plenary Session 5

**QUANTITATIVE STRUCTURE MODELS (QSM)
AND 3D RECONSTRUCTION**

Chair: Jean-François Côté

202

- 13h00 Validation of quantitative tree structure modelling approaches using synthetic 3D point clouds
Josafat-Mattias Burmeister, University of Potsdam, Digital Engineering Faculty, Potsdam, Germany
- 13h15 Fitting QSMs to uncertain laser scanning data from trees
Vincent Verhoeven, Tampere University
- 13h30 Occlusion mapping and completion of trees from terrestrial and canopy laser scanning
Wout Cherlet, Ghent University
- 13h45 Production-ready quantitative structure modeling from MLS point clouds in leaf-on conditions
Jean-Romain Roussel, r-lidar
- 14h00 A 3D competitive index for modeling tree crown growth in boreal forests using LiDAR point clouds
Mariana Campos, Finnish Geospatial Research Institute

Plenary Session 6

CLOSE-RANGE SENSING FOR PRECISION FORESTRY

Co-chairs: Luiz C E Rodriguez & Tereza Hüttnerová

203

- 13h00 A comparative analysis of TLS and MLS technologies for estimation of dendrometric tree characteristics in mixed temperate forests
Marius Petrila, INCDS "Marin Drăcea" National Institute for Research and Development in Forestry
- 13h15 Finding the best PLS scanning strategy: How patterns, line distances, and plot sizes affect forest data collection
Ramazan Bülbül, Eberswalde University for Sustainable Development
- 13h30 Individual tree segmentation from ground-based LiDAR: A multi-factor performance analysis
Maksymilian Kulicki, Polish Academy of Science, IDEAS NCBR
- 13h45 Point cloud data as a source for single tree assessment in precision forestry
Krzysztof Stereńczak, Department of Geomatics, Forest Research Institute
- 14h00 Decoding forest complexity: Linking tree crowns and stand structure for precision silviculture
Nicolas Cattaneo, Norwegian Institute of Bioeconomy Research

14h15 Coffee break 200C

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Plenary Session 7

📍 200A

ASSESSING FOREST CHANGE AND SILVICULTURAL IMPACTS WITH MULTI-TEMPORAL LIDAR

Chair: Shashank Bhushan

- 14h45 Building a forest cover change reference dataset from multitemporal airborne LiDAR
Camile Sothe, Planet Labs PBC
- 15h00 Operationalized assessment of commercial thinning with multitemporal LiDAR: a framework and regional case study of managed coniferous stands
Liam Irwin, Department of Forest Resources Management, University of British Columbia
- 15h15 Assessment of canopy and regeneration response to partial harvest in a northern hardwood forest using multitemporal LiDAR
Alexandre Morin-Bernard, Department of Wood and Forest Sciences, Université Laval
- 15h30 Multitemporal LiDAR tree inventory to quantify fertilization effects on forest carbon sequestration
Thuan Chu, Forsite Consultants Ltd

Plenary Session 8

📍 202

FROM 3D STRUCTURES TO FOREST FUNCTION

Chair: James McGlade

- 14h45 Assessment of phenological forest structural dynamics using mobile laser scanning
Daniel Kükenbrink, Swiss Federal Research Institute WSL
- 15h00 The use of UAV-LiDAR time series to monitor spring and fall phenology of a beech provenance experiment
Harm Bartholomeus, Laboratory for Geo-Information and Remote Sensing, Wageningen University
- 15h15 Uncovering phenological effects on ALS forest mapping: a central european case study
Florian Franz, Northwest German Forest Research Institute, Section Remote Sensing and GIS, Grätzelstr, Department for Spatial Structures and Digitization of Forests, Germany
- 15h30 Demonstrating the potential of automated laser scanning to capture forest structural dynamics
Karun Dayal, Q-ForestLab, Ghent University, Belgium
- 15h45 Explaining resin production variability of Pines using TLS-derived crown and stem characteristics
Fabian Fassnacht, Freie Universität Berlin

Plenary Session 9

📍 203

DATA FUSION: INTEGRATING LIDAR WITH OPTICAL AND SAR SATELLITE DATA

Chair: Michael Burnett

- 14h45 A comparison of mapping canopy heights in boreal forests with SAR and optical imagery
Ali Zarringhalam, University of Maryland
- 15h00 Improvement of classification accuracy of land use using Sentinel-2 and GEDI data in the Andean region
Yasumasa Hirata, Forestry and Forest Products Research Institute
- 15h15 Can IceSAT-2-derived canopy heights be predicted using post-disturbance regrowth assessed using NLCD tree canopy cover?
Randolph Wynne, Virginia Tech
- 15h30 Landsat and LiDAR models of forest nitrogen enrichment
Valerie Thomas, Virginia Tech
- 15h45 Leveraging LAI from optical and LiDAR data for improved hydrological modelling during forest recovery
Brianne Boufford, University of British Columbia, Faculty of Forestry

16h00

Poster session

📍 200C

Visit the fourwaves platform for poster titles, presenters, and poster numbers.

Cash bar will be open during the event.

**SILVILASER 2025 THANKS ITS BRONZE SPONSORS WHO HELPED MAKE THIS CONFERENCE POSSIBLE**

Don't miss the opportunity to visit their exhibition tables during the poster session (or at another time!) in room 200C

SilviLaser2025 also thanks financial support from



01

WEDNESDAY
OCTOBER 01

8h00 Morning coffee 200C

9h00 Keynote Speaker 200A
AMY L. NEUENSCHWANDER, Senior research scientist, University of Texas
ICESAT-2 GLOBAL FOREST PRODUCTS: EVERY PHOTON COUNTS

10h15 Coffee break 200C

Plenary Session 10 200A
CHARACTERIZING FOREST STRUCTURE AND COMPLEXITY
 Co-chairs: Markus Hollaus & Daniel Kükenbrink

10h45 Improved measures of forest structural complexity
Cameron Pellett, Swedish University of Agricultural Sciences

11h00 Capturing trends in forest structural complexity development using various laser scanning techniques
Reinis Cimmins, University of Eastern Finland

11h15 On the link between productivity and complexity and how it scales from trees to forests
Konstantin Köthe, Georg-August-University Göttingen

11h30 Boundary effects on forest structure in forest reserves of Central Europe
Aikio Erhardt, Technical University of Munich

11h45 Mapping riparian multifunctionality using ALS metrics of vegetation structure
Leanna Stackhouse, University of British Columbia

SILVILASER 2025 | WEDNESDAY OCTOBER 01

Plenary Session 11 202

INDIVIDUAL TREE STRUCTURE: CROWN AND STEM ANALYSIS

Co-chairs: Kim Calders & José Riofrío

10h45 Evaluating genetic parameters of eucalypt progeny trials using point cloud LiDAR data
Humberto Tadeu Menecheli Filho, ForLiDAR

11h00 Phenotypic variation in *Eucalyptus grandis* across a bioclimatic gradient: Insights from terrestrial LiDAR
Oluwaseun F Gakenou, Department of Forest and Wood Science, Stellenbosch University

11h15 Crown structure and diameter growth in European forests
Emily Lines, University of Cambridge

11h30 How far and in which direction? Leaning of tree crowns in European temperate natural forests.
Kamil Král, Department of Forest Ecology, Landscape Research Institute

11h45 Small-scale horizontal and vertical microclimatic heterogeneity depend on forest structural complexity
Kerstin Pierick, University of Göttingen

Plenary Session 12 203

LIDAR FOR MICROCLIMATE AND ENVIRONMENTAL STRESS CHARACTERIZATION

Chair: Akira Kato

10h45 Impact of LiDAR-derived canopy structure on understory microclimate: Comparing observations with physics-based model predictions
Nathan Corroyez, INRAE, AgroParisTech, Cirad, CNRS, Univ. Montpellier, UMR TETIS

11h00 Atypical tree structures and transpiration as a route into refined water budgets: *Eucalyptus largiflorens* in Southern Australia
Rafael Bohn Reckziegel, RIEL Charles Darwin University and Environment CSIRO

11h15 Small-scale horizontal and vertical microclimatic heterogeneity depend on forest structural complexity
Kerstin Pierick, University of Göttingen

11h30 Linking LiDAR metrics with microclimatic variables obtained by electronic noses to uncover invisible but significant forest stress indicators
Tereza Hüttnerová, Faculty of Forestry and Wood Sciences, Czech University of Life Sciences Prague

11h45 European beech under drought: effects of topography, competition and soil water availability
Julia Rieder, Department of Remote Sensing, Institute of Geography and Geology, Julius-Maximilians-University Würzburg

12h00	Lunch Break	📍200C
	Plenary Session 13 ESTIMATING ABOVEGROUND BIOMASS AND CARBON Co-chairs: Sam Grubinger & David Voyer	📍200A
13h00	Investigating the error budget of AGB estimation from ALS using digital twins. Junliu Yang , UMRAMAP Univ Montpellier CIRAD, CNRS, INRAE, IRD	
13h15	Individual tree vs. area-based approach for aboveground biomass density estimation: how much point density is required? Steven Wagers , Canadian Forest Service, Natural Resources Canada	
13h30	Object-based upscaling approach for tree volume estimation using TLS and ALS Moonis Ali , Department of Civil Engineering, Indian Institute of Technology Kanpur	
13h45	Estimating the carbon storage of giant trees in Tasmania using multi-scale laser scanning Kim Calders , Ghent University	
14h00	Turning leaf point clouds into leaf mass by upscaling destructive and mobile LiDAR data in tropical forests Stephane Momo Takoudjou , University of Liège	
	Plenary Session 14 LIDAR FOR BIODIVERSITY, HABITAT AND ECOLOGICAL INSIGHTS Co-chairs: Emily Lines & Piotr Tompalski	📍202
13h00	Revelation from above: Detecting forgotten forest biodiversity with airborne LiDAR Lucas Chambon , Université du Québec en Abitibi Témiscamingue, Centre d'étude de la forêt	
13h15	Predicting the Index of Biodiversity Potential (IBP) of forest habitats from airborne LiDAR data: first results Manon Collard , University of Toulouse, INRAE, UMR DYNAFOR	
13h30	Epiphyte species richness as a basis for a biodiversity index in boreal forest ecosystems Antti Polvivaara , University of Eastern Finland	
13h45	Mapping and monitoring woodland vernal pools with LiDAR and SAR data Nancy French , Michigan Technological University	
14h00	3D reconstruction and machine learning assisted ecological analysis of LiDAR forest point clouds in Sweden José Augusto Correa Martins , SLU - Institutionen för skoglig resurshushållning Avdelningen för skoglig fjärranalys	

	Plenary Session 15 TREE SPECIES CLASSIFICATION WITH MULTI-SOURCE DATA Chair: Randy Wynne	📍203
13h00	Multispectral airborne laser scanning for tree species classification: A benchmark of machine learning and deep learning algorithms Eric Hyypä , Finnish Geospatial Research Institute (FGI)	
13h15	Tree species classification using multimodal deep learning with PRISMA spaceborne hyperspectral and airborne laser scanning data Omid Reisi Gahrouei , Digital Forest Lab, Department of Geomatics Sciences, Université Laval	
13h30	Estimating tree species proportions using airborne laser scanning data and Sentinel-2 data with a deep learning dual-stream data fusion approach Brent Murray , University of British Columbia	
13h45	Enhancing tree species classification using MLS-integrated LiDAR and photographic data for improved forestry monitoring Philippe Nolet , Isfort - Université de Québec en Outaouais	
14h00	Integrating multi-source remote sensing and adaptive deep learning for canadian boreal forests Yuwei Cao , Department of Forest Resources Management, University of British Columbia	
14h15	Coffee break	📍200C
	Quebec City Walking Tour	📍PROMENADE DESJARDINS
15h00	Mandatory registration for this activity; make sure to have your group identifier in hand (found with your name tag). Departure at 15h00, please be on time.	
	Conference Dinner	📍LA NEF 160 RUE SAINT-JOSEPH EST
19h00	Mandatory registration for this activity; make sure to have your ticket in hand (found with your name tag).	

8h00 Morning coffee 200C

9h00 Keynote Speaker 200A
KEVEN LIM, CEO, Remsoft
FROM CANOPY TO CLOUD: 25 YEARS OF LIDAR, FOREST INTELLIGENCE, AND THE ROAD AHEAD

10h15 Coffee break 200C

Plenary Session 16 200A
UAV/DRONE-BASED LIDAR FOR HIGH-RESOLUTION MONITORING
 Co-chairs: Richard Fournier & Daniella Tavi

10h45 Systematic assessment of RPAS-LiDAR flight and sensor parameters suggest efficiencies for tree phenotyping and forest inventory
Olivier van Lier, Natural Resources Canada

11h00 Intra-canopy drone photogrammetry for high-resolution tree-level characterization
Lukas Olson, University of British Columbia

11h15 Remote sensing for precision forestry: A comparison of LiDAR and digital aerial photogrammetry from drones and airplanes in boreal forests
Kim André Anstensen Nielsen, Norwegian University of Life Sciences

11h30 Attsjö super test site: advancing precision forestry using high-resolution UAV-based LiDAR and optical remote sensing data
Basam Dahy, Linnaeus University

Plenary Session 17 202
DEEP LEARNING FOR INDIVIDUAL TREE SEGMENTATION AND ANALYSIS

Co-chairs: Val Thomas & Robert Froese

10h45 QC-SF : Québec Simulated Forest, a virtual ALS dataset for boreal forest
Olivier Stocker, CRDIG, Université Laval

11h00 ISCL: a new algorithm for individual tree detection from LiDAR point clouds
Ergin Cankaya, University of Alberta

11h15 High-resolution tree detection using YOLOv8 and UAV LiDAR data
Esra Sengun, Linnaeus University

11h30 Predicting crown shapes of coniferous trees from incomplete point clouds using deep learning
Aline Bornand, Swiss Federal Institute for Forest, Snow and Landscape Research WSL, University of Zurich (UZH)

11h45 TreeAIBox: An operational deep learning framework for individual-tree analysis using airborne, UAV, and terrestrial LiDAR
Dmytro Movchan, Natural Resources Canada

Plenary Session 18 203
LIDAR AT THE WILDLAND-URBAN INTERFACE
 Co-chairs: Yasumasa Hirata & Brindusa Cristina Budei

10h45 From 2-D to 4-D monitoring of Krakow's urban forests using ALS LiDAR point cloud time series
Piotr Wężyk, University of Agriculture in Krakow

11h00 Predicting 3D tree crown encroachment along power lines using multi-temporal LiDAR
James McGlade, University of British Columbia

11h15 Innovative detection of mistletoe invasion of urban trees using AI algorithms and dense 3-D LiDAR point clouds
Piotr Wężyk, University of Agriculture in Krakow, 2ProGea 4D Ltd

11h30 Integrating LiDAR and AI for agroforestry analysis
Nelson Mattie, University of Alberta

12h00	Lunch Break + Poster session	📍 200C
	Plenary Session 19 MAPPING WILDFIRE FUELS AND FOREST RECOVERY Co-chairs: Christopher Bater & Ali Zarringhalam	📍 200A
13h00	Canopy and stand attributes estimation from airborne laser scanner data for fuel structure mapping in pure and mixed Eucalyptus forests Eva Marino , Spanish National Research Council (CSIC), Forest Science Institute (ICIFOR-INIA)	
13h15	Comparison of wildfire fuel and forest structure change post-mountain pine beetle attack using multi-temporal RPAS LiDAR Evan Gerbrecht , Integrated Remote Sensing Studio, Department of Forest Resources Management, University of British Columbia	
13h30	Tracking post-fire recovery of 3D mediterranean forest structure Atticus Stovall , NASA Goddard Space Flight Center, 2University of Maryland	
13h45	Leveraging remote sensing for high-resolution wildfire fuels mapping: Advancing wildfire risk and behaviour analysis Joseph Rakofsky , Forsite Consultants Ltd.	
	Plenary Session 20 DEEP LEARNING FOR LARGE-AREA MAPPING Co-chairs: Guillermo Castilla & Grant McCartney	📍 202
13h00	From k-NN to 3D-CNN: Improving forest biomass predictions using deep learning Andras Balazs , Natural Resources Institute Finland	
13h15	Forest variable predictions using deep learning models in multi-modality airborne data Johan E.S. Fransson , Linnaeus University	
13h30	Forest aboveground biomass estimation using deep learning data fusion of LiDAR, multispectral, and topographic data Harry Seely , Department of Forest Resource Management, University of British Columbia	
13h45	Semantic segmentation of forest stands using deep learning Hans Ole Ørka , Norwegian University of Life Sciences	
14h00	Mapping the remaining tall canopies forests of Vancouver Island forests with LiDAR, Sentinel-1, Sentinel-2 and deep learning Luizmar De Assis Barros , University of Northern British Columbia	

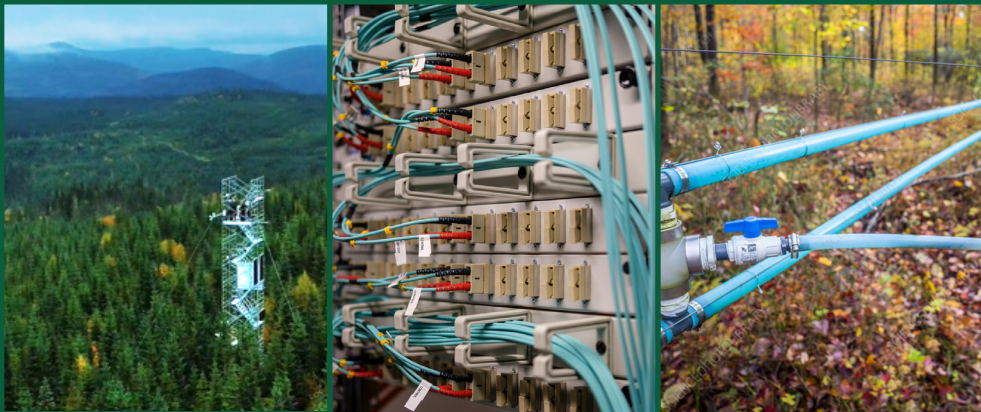
	Plenary Session 21 INNOVATIONS IN WOOD QUALITY AND TRACEABILITY ASSESSMENT Chair: Alexis Achim	📍 203
13h00	Automatic tracing of single trees using close-range laser scanning Henrik Persson , Swedish University of Agricultural Sciences	
13h15	Biometric recognition of Scots pines using laser scanning-derived tree fingerprints Tuomas Yrttimaa , School of Forest Sciences, University of Eastern Finland, Department of Forest Sciences, University of Helsinki	
13h30	Insights into the assessment of wood quality using multi-platform laser scanning at the individual tree level Jiri Pyörälä , University of Helsinki, Finnish Geospatial Research Institute	
13h45	Mapping wood quality: Does the tree crown reflect wood density? Andreas Tockner , BOKU University	
14h00	Using bi-temporal laser scanning to assess wood properties Mikko Vastaranta , University of Eastern Finland	
14h15	Coffee break	📍 200C
	Plenary Session 22 NATIONAL AND LARGE-SCALE FOREST INVENTORIES Co-chairs: Joanne White & Yuwei Cao	📍 200A
14h45	Accurate and bias-free reference for country-level single-tree forest inventory Jesse Muhojoki , Finnish Geospatial Research Institute FGI	
15h00	Airborne laser scanning transects over Canada's northern forests for calibration and validation of wall-to-wall satellite information products Christopher Bater , Canadian Forest Service	
15h15	Integration of airborne laser scanning products, national forest inventory, and auxiliary data to facilitate stand-wise forest inventories: The case of lithuanian state forests Monika Papartė , Vytautas Magnus University	
15h30	National forest inventory in Tajikistan, backpack LiDAR on GEDI footprints Günther Bronner , Umweltdata, Austria	
15h45	Parameterizing robust prediction of aboveground biomass for the GEO-TREES network using airborne laser scanning and a rich network of forest plot measurements in central Panama Samuel Grubinger , University of Maryland	

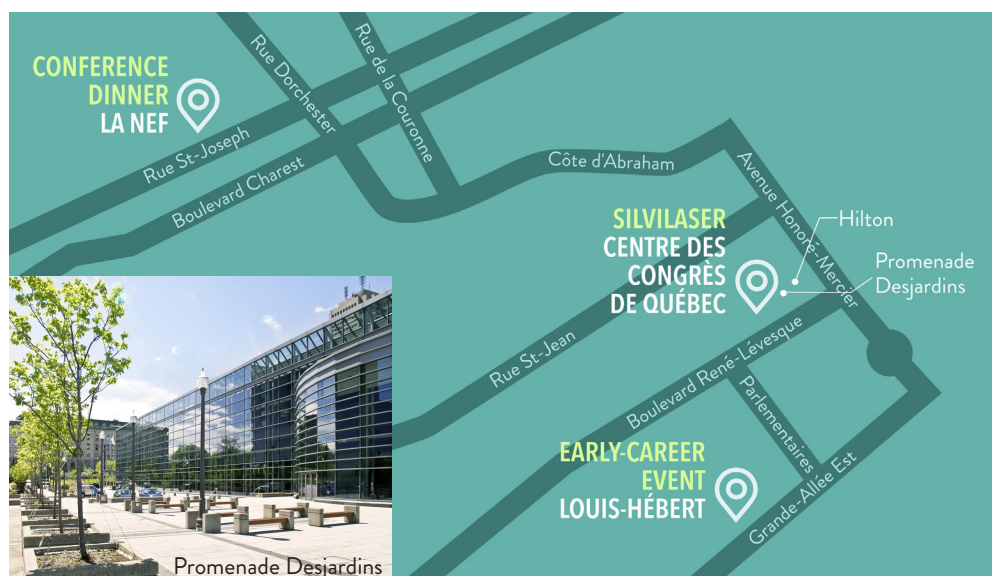
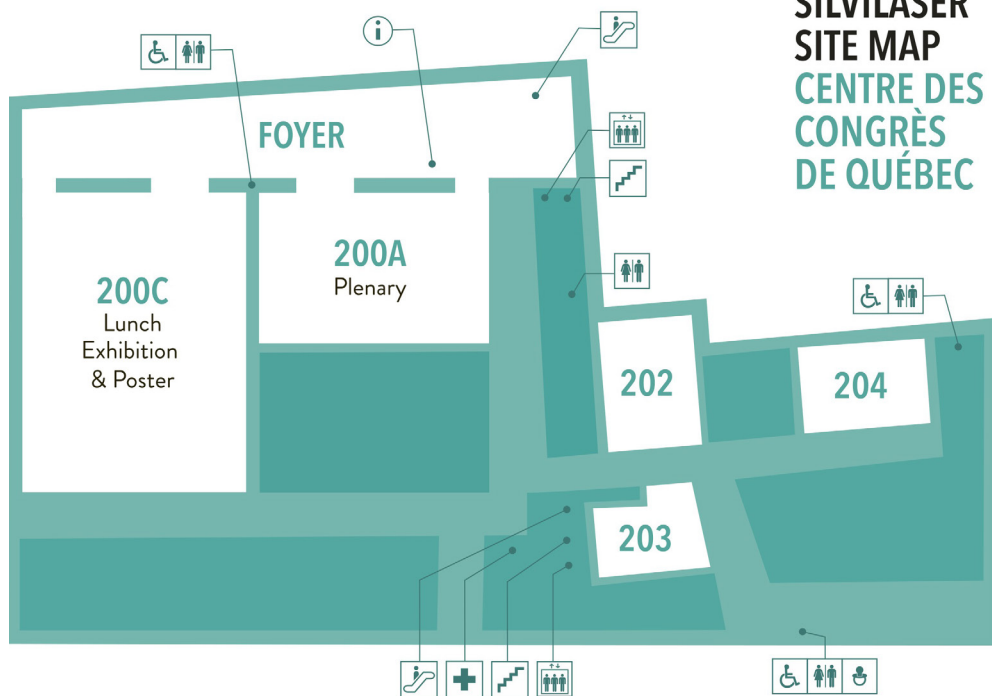
Plenary Session 23		📍 202
INNOVATIVE TOOLS AND LOW-COST SENSING IN FORESTRY		
Chair: Olivier van Lier		
14h45	Smartphone inbuilt sensors for forest inventory variable assessment Peter Surovy , Czech University of Life Sciences Prague	
15h00	A low-cost portable method for ground vegetation structural assessment using the iPhone 15 Pro LiDAR scanner Broghan Erland , Newcastle University	
15h15	Is the low-cost laser scanning future of precision forestry and national forest inventories? Jozef Výboštok , Technical University in Zvolen, University College	
15h30	Gotta Scan 'Em All!: Gamified augmented reality for close-range forest pointcloud data collection Philip Chambers , University of Eastern Finland	
15h45	Combining TLS and X-ray data to evaluate tree stem biomass in continuous-cover forests (CCF) and rotation forests (RF) Norway spruce stand Otto Saikkonen , University of Helsinki	
Plenary Session 24		📍 203
ROBOTICS, AUTOMATION, AND OPERATIONAL SYSTEMS IN FORESTRY		
Chair: Francois Pomerleau		
14h45	DIGIFOREST: Digital analytics and robotics for sus-tainable forestry Sunni Kanta Prasad Kushwaha , Swiss Federal Institute for Forest, Snow and Landscape Research WSL	
15h00	FoMo: enhancing forestry operations with a multi-season robotic navigation dataset Matej Boxan , Université Laval	
15h15	Dual-LiDAR and inertial-based efficient and robust SLAM for forest harvester Tamas Faitli , Finnish Geospatial Research Institute	
15h30	Tree stem quality detection for Forest CTL machine operator assistance using LiDAR scans Arundev Satheesan , Finnish Geospatial Research Institute	
15h45	Long wood volume estimation with a LiDAR/camera-based system Maxime Vaidis , Université Laval	
14h15	Closing address	📍 200A

FRIDAY
OCTOBER 03

03

SILVILASER FIELD TRIP

8h00	Departure	📍 PROMENADE DESJARDINS		
				
NORTHERN ROBOTIC LAB (NORLAB)		CENTER FOR OPTIC, PHOTONIC AND LASERS (COPL)		SUGAR MAPLE RESEARCH STATION
📍 MONTMORENCY FOREST		📍 UNIVERSITÉ LAVAL		📍 SAINT-AUGUSTIN-DE-DESMAURES
Demonstration of mobile autonomous systems using LiDAR for localization and 3D reconstruction in challenging environments		Learn about the COPL's latest research and technological advances in lasers used for teledetection		Discover one of Université Laval's newest research infrastructure and enjoy a drone demo



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