MARITIME COLLEGE OF FOREST TECHNOLOGY

INTRODUCTION TO LiDAR BASED ENHANCED FOREST INVENTORY (EFI), TERRAIN and SURFACE PRODUCTS FOR FOREST PROFESSIONALS

FROM: MARITIME COLLEGE OF FOREST TECHNOLOGY

SUBJECT: March 29th & 30th, 2017 course offering

The Maritime College of Forest Technology's, Department of Continuing Education is pleased to offer **Introduction to LiDAR Based Enhanced Forest Inventory (EFI), Terrain and Surface Products for Forest Professionals** with Riley Côté-DeMerchant as instructor. The dates are March 29th & 30th, 2017 beginning at 8:30 AM each day. The course will be held in room 230 of the Maritime College of Forest Technology, Fredericton, New Brunswick. Specific course details including an instructor profile, application form, and tuition costs are included in the attached announcement.

As LiDAR accessibility continues to increase, more industries are adopting the technology and discovering its practical and cost-saving applications. Resource industries including forestry, mining, and energy, are using LiDAR to increase efficiencies and lower operational costs. These industries are continuously discovering new ways to manipulate and apply data to better their operations, such as discovering watercourses and previously undetected structures and growth patterns.

Much like the GIS, LiDAR has the potential to revolutionize the forest industry. The availability of LiDAR derived Enhanced Forest Inventories has recently become more common and available across many land bases in New Brunswick and Nova Scotia, presenting forest professionals with an unprecedented amount of relevant data. The available information ranges from basic tree height, to more complex and detailed inventory attributes such as diameter distribution of stems throughout a stand. Further, EFI provides highly detailed information on the ground, including elevation data, percent slope and, and accurate hydrographic information.

1350 Regent Street
Fredericton, NB
E3C 2G6

Tel: (506) 458-0199
Fax: (506) 458-0652
Email: info@mcft.ca

www.mcft.ca

Through hands on demonstrations of software, this course will introduce students to the basics of LiDAR; what it is, how it works, and why it is an economical choice for data collection and analysis. An overview of LiDAR equipment, and discussion of predicted upcoming LiDAR advances, applications and trends will also take place. Riley will also provide insight into the cost-savings that Leading Edge Geomatics (LEG)'s LiDAR products and services provides. You will find out exactly how LiDAR technology can:

- Lower operational costs
- Identify high value wood products
- Analyze variation in forest growth and performance
- Increase safety
- Reduce negative environmental impacts
- Improve change detection
- Account for within stand variability across the landbase

If you have any questions or wish to reserve a seat on this or any other course, please call 506-458-0649.

Todd MacPherson, Supervisor
Department of Continuing Education

INTRODUCTION TO LiDAR BASED ENHANCED FOREST INVENTORY (EFI), TERRAIN and SURFACE PRODUCTS FOR FOREST PROFESSIONALS

DATES: March 29th & 30th, 2017

TIME: 8:30 AM – 4:30 PM each day

LOCATION: Room 230, Blenis Hall, Maritime College of Forest Technology, Fredericton NB.

OBJECTIVES: This program is designed to help participants:

- Provide an overview of what LiDAR is and how it works
- Briefly describe and discuss LiDAR Sensors, Acquisition, Accuracy Assessment, Quality Control and Processing
- Overview of LiDAR Applications other than forestry
- Detailed Review of LiDAR Applications for Forestry from a Maritime Context
- Details of EFI and LiDAR surface and terrain products
- Benefits of EFI and LiDAR surface and terrain products
- How to integrate EFI and LiDAR surface and terrain products into your business
- Hands on analysis of EFI and LiDAR surface and terrain products
- Discuss predicted trends and application advancements

CANDIDATES: This program is designed for people working in the resource industry, such as forestry, mining, and energy, with a specific focus for those who participate in:

- harvest and silvicultural planning
- road and trail planning
- process improvement analysis
- wetland or watercourse mapping

Working knowledge of ArcGIS is a requirement for this course

FORMAT: **Introduction to LiDAR Products** training will be conducted in an informal manner. The workshop will follow the order presented above in the objectives of the course. The majority of the course is centered on classroom instruction with individual and group exercises. Half of the final day will be centered around hands on analysis of a sample data set.

FACILITATORS: **Riley Côté-DeMerchant** is currently LEG's Lead Forest Product Developer, and has been with the company since 2010. A graduate of MCFT, Riley has several years' experience in Forestry, with a focus on Forest Management, GIS, remote sensing, and forest inventorying using LiDAR. During his five years at LEG, Riley has been working to develop remote sensing solutions for the forest

industry, and has also aided in the development of solutions for vegetation mapping as it pertains to both the powerline and airport industries.

FACILITATORS (cont'd): Riley is well-versed in many aspects of the Forest Industry, having attended countless workshops and conferences, and presented at the Enhanced Forest Inventory Workshop at the Canadian Woodlands Forum Spring Meeting in Moncton, and the LiDAR in Forest Management Seminar at the Northern Hardwoods Research Institute.

Bill Kidman is the President and co-founder of Leading Edge Geomatics (LEG). Exceedingly passionate about geomatics and all things related, Bill has years of mapping and technical experience.

After graduating from the Canadian Forces School of Military Mapping in 2003, Bill began his career in mapping with the Department of National Defence. Upon retirement in 2008, Bill took on the position of President and Chief Technical Officer of Leading Edge Geomatics.

Bill's extensive mapping background includes missions around the world including Kandahar, Afghanistan, with the US Naval Research Laboratory Marine Geophysics Branch, to assist in a multi-sensor, high-altitude, geophysical survey of Afghanistan.

Bill enjoys being involved in all research and development as well as collaborating with industry professionals to discover new applications for Leading Edge Geomatics' products and services in various industries.

Duncan Allen is the Remote Sensing Solutions Team Lead. He is responsible for all phases of LiDAR and Photogrammetry production support and related GIS integration. A graduate of UNB and COGS, Duncan began his career with LEG in 2008. He has been involved in nearly every project at Leading Edge, managing teams, working directly with data, or both. Duncan has contributed to the development of many of LEG's solutions, specifically their EFI products.

ENROLMENT: Enrolment will be limited to twenty five (25) candidates on a first come-first served basis.

ACCOMMODATIONS:

Commercial rooms and/or board are available at nearby commercial establishments.

MEALS: Meals are available at the cafeteria on a pay-as-you-go basis or meal tickets can be purchased at registration.

TUITION: Tuition for the program, including supplies, is $459.00 + 15% HST.

Introduction to LiDAR Based Enhanced Forest Inventory (EFI), Terrain and Surface Products for Forest Professionals is equivalent to
14 Continuing Forestry Education Credits

INTRODUCTION TO LiDAR BASED ENHANCED FOREST INVENTORY (EFI), TERRAIN and SURFACE PRODUCTS FOR FOREST PROFESSIONALS

March 29th & 30th, 2017

Name _____ Job Title _____

Employer _____

Employer's Address _____

_____ Postal Code _____

Business Phone _____ Fax _____

Cell Phone _____ E-mail _____

Contact Person _____

Home Address: _____

_____ Postal Code _____

Home Phone _____ Home E-mail _____

Fees of $459 + 15% HST per participant must be paid in full, one week prior to the course dates. Payment can be made by cheque, purchase order, debit, Visa or MasterCard.

There is a $250 cancellation fee if you cancel inside of two weeks' notice. All registrations submitted less than two weeks before course start date are non-refundable.

☐ **Please add me to your email list to receive future course announcements from MCFT**

☐ **I am a MCFT/MFRS Graduate from _____. Please add me to the Alumni mailing lists.**
(circle one) (insert year)

Please indicate method of payment:

Visa ☐ Card No. / / / / / / / / / / / / / / / / Exp. / / /

Mastercard ☐ Card No. / / / / / / / / / / / / / / / / Exp. / / /

Cheque ☐ Amount enclosed _____

Please forward-completed application to:

Todd MacPherson
Maritime College of Forest Technology
1350 Regent Street
Fredericton NB E3C 2G6 | Phone: (506) 458-0649 | Fax: (506) 458-0652 | E-mail: ce@mcft.ca