

The Research Seminar Presentation by

# Anastassia Lagounova

will be held on

### **Tuesday March 27, 2018**

## At 3:00 pm

#### **ALEXANDER HALL 265**

Title: Quantifying Soil Structure Dynamics in Agroforestry Riparian Buffers using X-ray Computed Tomography

#### Abstract

This study will be quantifying the topsoil structure of established agroforestry riparian buffers comparing common attributes found in Southern Ontario. The attributes will be focused on soil texture (loam vs. sand soils), forest age (mature vs. restored forests) and forest type (deciduous vs. coniferous forests). The study will also be examining the soil structure dynamics of the selected agroforestry riparian buffer sires. Intact soil cores are collected over a period of a year during seasonal changes (postwinter, end-of-spring, end-of-summer and pre-winter). Soil structure will be quantified from high-resolution 3D imagery of the soil cores obtained by an X-ray Computed Tomography (CT). The digital images will undergo computerized analysis to derive both morphometric measurements (size, shape etc) and spatial distribution (3D semivariance indices) parameters of soil phases (resolvable voids, solids and matrix). Statistical analysis will compare the dynamics of the topsoil structure of agroforestry riparian buffers containing the selected attributes.

#### Everyone is welcome to attend

(This is a Research Proposal presentation by students in ENVS\*6900)