

School of Earth and Environmental Sciences Fall 2024 Colloquium Series

Wednesday, October 9, 2024

12:15 PM -1:30 PM

Science Building C-207

Zoom ID: 865 5163 5654

Passcode: 684900

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Disturbance effects on soil carbon pools and fluxes

Disturbances can disrupt soil processes that regulate the global carbon (C)-climate feedbacks and are also expected to increase in frequency and magnitude over the next decades due to a warmer climate and the intensification of human activities worldwide. These shifts in disturbance regimes will potentially increase the vulnerability of soil C storage by disrupting plant-soil interactions and accelerating the emissions of greenhouse gases to the atmosphere. A key challenge is to understand the short- and long-term impacts of disturbances on the biogeochemical cycling of soil C. I will present two field manipulation studies aimed at assessing how soil carbon pools and fluxes respond to (1) increasing levels of disturbance severity (tree mortality); and (2) thermal extremes (heat waves). Data generated from these projects can be incorporated into predictive models to advance our understanding of how soil C storage and dynamics will respond to shifts in disturbance regimes under a changing climate.

