



THE LABORATORY OF TREE-RING RESEARCH

presents a talk by

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Tree rings go global: the use of large networks in environmental change research

Wednesday, May 13, 2015 - 12:00pm to 1:00pm

Room: Bannister 110

A major goal of current environmental change research is to add more realism to projections of ecosystem functioning in a warming world. This requires a large-scale understanding of plant responses to climate variability and change. Forests in particular are a major player in the coupled biosphere-climate system and critically determine terrestrial carbon cycling. Studying tree growth on multiple spatiotemporal scales is thus a prerequisite to develop robust benchmarks e.g. for vegetation model simulations of forest productivity.

Tree rings offer a long-term perspective on forest growth that is increasingly integrated with other data streams and disciplines. Thanks to the steadily increasing number of available tree-ring records (currently >3000 on the International Tree Ring Data Bank), dendrochronology is no longer confined to individual sites or regions. Instead, recent studies have used extensive tree-ring networks to assess large-scale patterns of climate response, extreme events, carbon allocation, and to evaluate vegetation model output. This talk summarizes both the potential and challenges that have emerged from these studies and highlights some urgent issues that need to be addressed to increase the utility and appeal of tree-ring data for global environmental change research.