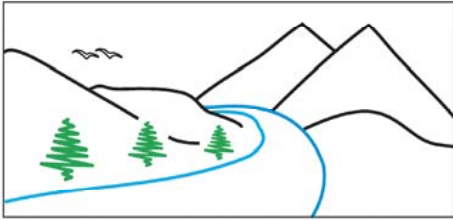


NRESi



"Our environment is our future"

## RESEARCH COLLOQUIUM SERIES

### Dr. Stephen J. Mitchell

Associate Professor  
Department of Forest Sciences, UBC



**Thursday**  
**Apr. 16, 2009**

**1:00 - 2:00**

**LECTURE THEATRE**

**7 - 152**

LIGHT REFRESHMENTS  
SERVED AT 3:20 PM

## Windthrow Risk Modelling

I will present on our mechanistic and empirical windthrow modelling work and give an update on the status of ForestGALES\_BC, the windthrow risk model that we are developing in conjunction with the UK Forestry Commission. Our mechanistic work includes measuring drag on conifer and deciduous crowns in the UBC Mechanical Engineering wind tunnel, modeling windflow over terrain with MM5 and MC2 mesoscale numerical weather simulation models, tree-pulling to measure critical turning moments. Our empirical work includes fitting logistic regression models to predict the probability of cutblock edge windthrow using edge segment databases assembled in geographic information systems, and fitting models to tree outcomes using plot-based datasets for partial cuts. We have drag and winching datasets for interior spruce and lodgepole pine and empirical models for stands near Prince George.