



## Riddell Faculty Seminar Series presents:

### **Increasing Risk: Lowering the Resource – Hazard Threshold in Mountain Regions**

Dr. James Gardner

**Abstract:** High mountain regions are prone, perhaps disproportionately so, to disasters arising from natural and other hazards. There, risk of disaster is high due to inherent geo-ecological processes and conditions, and the exposure of vulnerable populations, land uses and infrastructure. Many of the conditions and processes that prove to be hazardous also are resources that have attracted people, land uses and infrastructure. For example, a river that supplies water, power, transport and recreation may, when in flood, drown people, destroy settlements and crops, and disrupt all civil and other activity, producing a disaster. Thresholds, defined by geo- and social-ecological conditions, distinguish between resource and hazard. Using case studies from the Canadian Rocky Mountains, European Alps, Indian Himalaya, Peruvian Andes, and Hengduan Mountains of Southwest China, this presentation will describe the dynamic character and spatial and temporal variability of the resource-hazard thresholds in high mountain regions. In doing so, it will demonstrate and explain that risk of disaster, while variable, has increased substantially.

### **A re-evaluation of the 1994 Phojal Nalla flood - physical and societal impacts**

Dr. Esther Edwards & Dr. Richard Johnson

**Abstract:** Coping with natural hazards is part of everyday life in the Himalayan region of Northern India where expanding populations and ever growing pressure on land use and resources are modifying local vulnerability and risk from mountain flood and slope instability events. This short presentation examines new and ongoing research that enables an updated reconstruction of a catastrophic flood event that occurred in the Phojal Nalla catchment in August 1994. New insights have allowed further exploration of the ongoing impacts of this event on local communities by examination of the heritage-vulnerability-resilience relationship. An important objective of this research is to explore whether vulnerability-resilience may be enhanced through the development of cultural heritage in which social, economic and environmental capital can facilitate awareness, coping and adaptation to natural hazard events. Accordingly, this presentation considers physical reconstructions, community heritage conditions and societal responses to the flood trauma in terms of tangible and intangible factors through integrated physical science and social science methodologies.

**Date:** Tuesday, November 25<sup>th</sup>, 2014  
**Time:** 1:30 p.m. - 3:00 p.m. **Place:** 320 Sinnott Building