

# SEMINAR NOTICE

*Department of Physics and Engineering Physics  
University of Saskatchewan*

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**SPEAKER:** Dr. Nicholas Kinar  
Centre for Hydrology, Global Institute for Water Security

**TOPIC:** *Environmental Physics of Hydrology and Glaciers in the Rocky Mountains*

**DATE:** October 17, 2017

**TIME:** 3:30-4:30 p.m.

**PLACE:** Physics 103

## **ABSTRACT:**

Physical Hydrology is the study of the spatial distribution and changes associated with water in the environment with a particular emphasis on physical processes. Although observations of the hydrological cycle have been made since antiquity, modern hydrology attempts to quantify the movement and transformation of water using statistical and mathematical models. In this regard, the study of hydrology involves applied physics. This talk will focus on how mass and energy balances have been used by hydrologists to model hydrological processes in the Rocky Mountains of Canada. I discuss snowpack formation and physical changes in the snowpack that lead to snowmelt and the production of water as runoff. In areas of the Rockies where snow can accumulate for months without melting, physical processes within the snowpack will transform the snow to ice and contribute to glacier formation. Climate change is currently causing a reduction in glacial area and thereby modifying hydrological processes in the Rockies. Research conducted at the University of Saskatchewan and by collaborative university consortiums has provided a better understanding of hydrology in the Rockies, but there are still some important research questions that need to be addressed.

*Coffee and Cookies will be served in Physics lounge at 3:00 p.m. for those attending the seminar.*