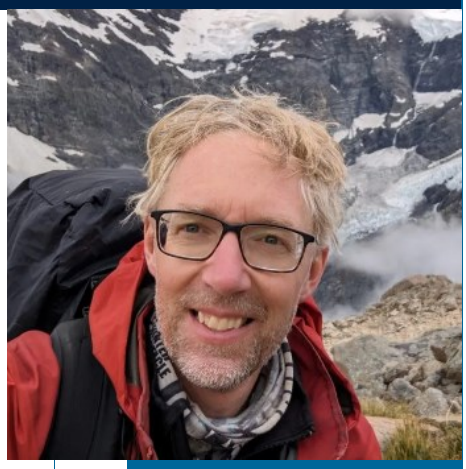
Irving K. Barber Faculty of Science

Department of Earth, Environmental and Geographic Sciences

EEGS SEMINAR SERIES 2025



Dr. Christophe Kinnard, Professor and Senior chair in Cryosphere Hydrology — Université du Québec à Trois- Rivières.

TALK TITLE:

GLACIER CLIMATE SENSITIVITY REVISITED: INSIGHTS FROM THE COLUMBIA ICEFIELD, CANADA.

ABSTRACT:

Glaciers are valuable indicators of climate change and provide key ecosystem services in headwater catchments of mountain regions. Accurate process-based models are required to simulate the response of glacier-mass balance to future climates and how it impacts hydrology and ecosystems. In this talk, I will present results from an ongoing research program on the Columbia icefield, the largest in the Canadian Rocky Mountains, that aims to improve the modelling of glacier mass balance in a context of sparse observations. The so-called concept of 'glacier climate sensitivity' is revisited by disentangling the different processes and feedbacks contributing to this sensitivity. I will also discuss how simple, empirical glacier models are able (or not!) to simulate future glacier mass-balance, and finally show preliminary findings on mapping glacier roughness to improve the modelling of energy fluxes at the glacier surface.

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EEGS Homepage

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Join us

Friday, March 7th

11:00am—12:00pm

SCI 374