SEMINAR NOTICE

Department of Physics and Engineering Physics
University of Saskatchewan

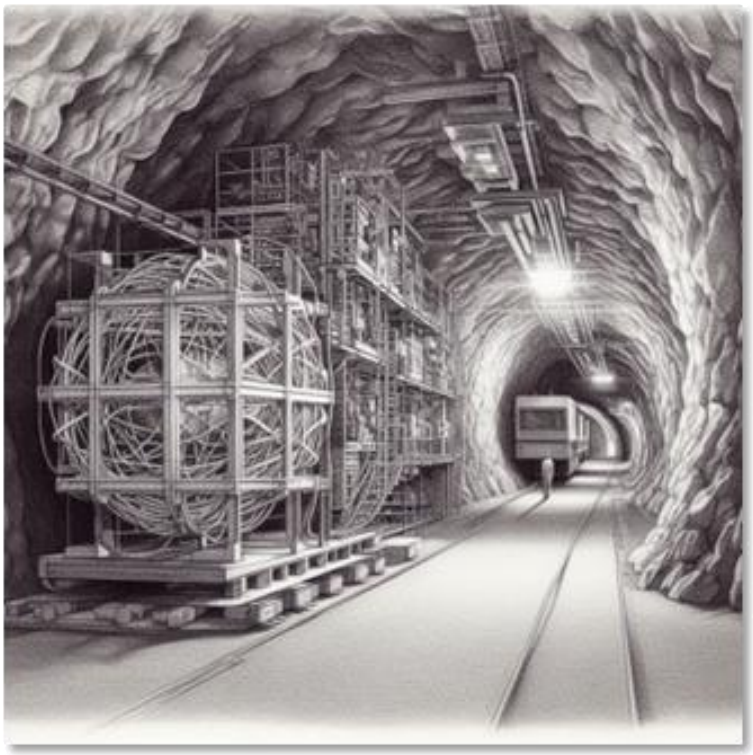
SPEAKER: Dr. Jeter Hall, Director
Fedoruk Centre and Laurentian University

TOPIC*:* *The entanglement of quantum computing and dark matter searches.*

DATE: Tuesday January 20th, 2026

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

I will discuss the interplay between fundamental and applied physics research using examples from my career. I will then focus on the example of the overlap in technologies and requirements between light dark matter searches and fault tolerant quantum computers. New sensors are required for light dark matter searches that extend current capabilities by reducing detector thresholds up to three orders of magnitude in energy. The required energy scales overlap with the energy scale of environmental disturbances that limit the coherence time of many candidate qubit systems, like superconducting circuits. I will close with some ideas on how future experiments can leverage these maturing quantum computing technologies for fundamental physics searches.



A quantum computer entangled with a dark matter detector in a mine two kilometers underground, pencil drawing, black and white. Generated with the assistance of AI.