

Quantum Sensors Challenge Project

Room Temperature Magnetic Quantum Sensor

Positions for graduate students and postdoctoral fellows

The NRC Quantum Sensors Challenge program aims to develop a disruptive generation of quantum sensors that are orders of magnitude better than sensors that exist today.

The Room Temperature Magnetic Quantum Sensor Project is a collaboration between the NRC Quantum and Nanotechnologies Research Centre and the University of Alberta. This project will develop and utilize ultraviolet frequency comb lasers to coherently access noble gas nuclear spin with long quantum coherence time at room temperature, and to sensing of environmental xenon isotopes.

We are seeking graduate students (MSc and PhD) and postdoctoral fellows. **To apply contact Prof. Gil Porat (gporat@ualberta.ca).**

Research topics include

- High-power frequency comb laser development
- Ultrafast nonlinear optical frequency conversion
- Laser spectroscopy
- Optical magnetometry
- Quantum sensing