

The Stewart Blusson Quantum Matter Institute at UBC is seeking highly motivated candidates to become part of the team working on the Grand Challenge project *Pushing the Boundaries of Noisy Intermediate Scale Quantum (NISQ) Computing by Focusing on Quantum Materials Problems*.

About the project

Quantum computers with a restricted number of qubits have recently been demonstrated in several laboratories. Owing to the unusual properties of quantum algorithms, even a small number of qubits may be sufficient to obtain meaningful computational results. The goal of this research program is to demonstrate that existing and near-term (5-8 years) quantum computing (QC) technologies can be used to generate meaningful computational results of scientific and/or commercial value that cannot be efficiently obtained through classical computation alone. It will approach this through a coordinated effort to develop novel strategies for using present day (NISQ-era) QC hardware.

The research team is led by Robert Raussendorf and includes principal investigators Mona Berciu, Joe Salfi, Roman Krems, Ian Affleck, Sarah Burke, Lukas Chrostowski, Josh Folk, Marcel Franz, Jeff Young and Eran Sela.

Available Research Associate position

Overall project scientific lead

Available Postdoctoral Fellowship positions

Machine learning for the extrapolation and inverse problems

Experiments in quantum hardware

Algebraic methods in quantum computing

Quantum algorithms

Hybrid Machine Learning algorithms for specific, real materials problems

Visit <https://qmi.ubc.ca/grand-challenges/quantum-computing> for information on how to apply.

POSTDOCTORAL FELLOWSHIP AND RESEARCH ASSOCIATE POSITIONS OPEN IN NISQ-ERA QUANTUM COMPUTING