Dear Colleagues,

TRIUMF together with its partners - Stewart Blusson Quantum Matter Institute at the University of British Columbia, Quantum Algorithms Institute, Simon Fraser University, University of Victoria, Université de Sherbrooke, Helmholtz's Association DESY and our industry partners Xanadu and D-Wave - are pleased to announce the *Cornerstone Models of Quantum Computing* Summer School / *TRIUMF Summer Institute 2021,* which will be taking place remotely from August 2 – 13, 2021.

The school will provide an in-depth introduction to the seminal models of quantum computing:
- Gate Model
- Annealing
- Measurement-Based
- Continuous Variable

The students will have a chance to work through challenges utilizing quantum computing processors and explore concepts within these main topics. In addition, students will gain awareness of the major technologies used in quantum computing, such as superconducting, photonic, and trapped-ion qubits. Major quantum computing applications such as quantum chemistry, nuclear physics and quantum assisted machine learning will be briefly summarized.

The school will take place from August 2nd to 13th, with several lecture hours, tutorials and office hours each day. Students are presented with challenge problems, and are expected to spend about 2-3 hours on them each day. Graduate and undergraduate students will be eligible for full and free enrollment. Non-students are encouraged to audit the lectures. The school is designed for students in quantitative disciplines. Physics background is not required - however participants should be familiar with complex linear algebra and python programming.

Registration will open on June 1st, 2021. There is NO cost to register.

Please bring this opportunity to the attention of graduate students, as well as senior undergraduates and post-doctoral researchers, interested in this area.

For further information, including a preliminary program and speakers, please visit: http://tsi.triumf.ca/2021/

Best regards,

The International Programs Committee:

- Daria Ahrensmeier (QAI/SFU)
- Alex Anees (SBQMI)
- Kerstin Borras (DESY)
- Yves Bérubé-Lauzière (Sherbrooke)
- Lukas Chrostowski (SBQMI)
- Olivia Di Matteo (Xanadu)
- Wojtek Fedorko (TRIUMF)
- Kim Kiloh (SBQMI)
- Hausi Muller (UVic)
- Irina Paci (UVic)
- Ulrike Stege (UVic)
- David Weekes (SBQMI)