

Discussion

Training of HQP in Quantum-Related Fields

TRIUMF quantum workshop
March 11, 2024

National Quantum Strategy

3 pillars:



Research



Talent



Commercialization

Developing, attracting and retaining the critical talent from within Canada and around the world to build the quantum sector.

Talent: Building a World-Leading Workforce

talent shortages

Develop the academic and private-sector talent base needed to underpin a successful Canadian quantum computing and software industry.

quantum-literate workforce (including business and marketing talent)

Specific training: e.g. Université de Sherbrooke has launched a Bachelor in Quantum Science program

Talent will be supported through programming at NSERC and Mitacs:

- [NSERC CREATE grants program](#) (\$5.4 million over six years)
- [Mitacs](#) (\$40 million over six years)

Improving diversity in the talent pool

Training of quantum workforce at TRIUMF

Observations:

- strong overlap of TRIUMF science with quantum-enabled techniques
- even for programs not directly linked to quantum-enabled (e.g. ion trapping at TITAN)
- Examples: TRIUMF-related HQP into quantum industry
 - ➔ muSR student to **D-Wave Quantum Systems** (Burnaby)
 - ➔ Students of TRIUMF collaborator to **Quantum Valley Labs** (Waterloo) and atomic clocks at **National Physical Laboratory** (Teddington UK)
- collaborators 'complaints':
 - ➔ difficulty to hire postdocs in fundamental quantum science
 - ➔ better paid jobs in quantum industry

Training of quantum workforce at TRIUMF

Questions:

- Could we collect a list of TRIUMF-HQP who went into quantum industry?
 - ➔ Summary / 1 pager on 'quantum training at TRIUMF'
- How relevant are we in this context?
 - ⇔ quantum-focused CREATE initiatives funded from 2010 to 2018 collectively supported 306 trainees.
- Would a more active focus on quantum training at TRIUMF be desirable?
- If yes: How? What should it contain?
 - ➔ TRIUMF summer school on quantum-enabled programs?
 - ➔ Training across different exp. programs?
 - ➔ Should we actively connect to local quantum industry?
- In which way would our science benefit from a TRIUMF-local quantum training?