Postdoc – Superconducting RF

Comp. #613

TRIUMF is Canada's national laboratory for particle and nuclear physics and accelerator-based science. We are an international centre for discovery and innovation, advancing fundamental, applied, and interdisciplinary research for science, medicine, and business. TRIUMF has world recognized expertise in a wide variety of accelerator technologies from high intensity beam dynamics, to high power targets and ion sources, to remote handling engineering, to superconducting radio frequency acceleration. Our staff designed and assembled all of its operating accelerators including a 40MV heavy ion superconducting linac and a 30MV superconducting electron linac. Our infrastructure, unique in Canada, supports SRF R&D including clean rooms, cavity testing cryostats, chemical etching and high pressure rinsing facilities, rf induction oven and rf infrastructure. We are also home to unique material science diagnostic probes in the muSR and betaNMR facilities.

TRIUMF is as diverse in our areas of expertise, people, and cultures, as we are in our career opportunities, and we are constantly seeking dynamic team players who thrive on creativity, excellence in service, and a busy environment. Currently, our SRF/RF Department has an immediate opening for a newly graduated rf engineer/physicist who will be responsible for NSERC (Natural Sciences and Engineering Research Council) funded Superconducting RF (SRF) research and development.

This postdoctoral position is grant funded and offered for a two year term.

The primary duties include:

- Coordinate and support SRF grant funded developments including coordinating design, installation and commissioning of NSERC funded equipment
- Conducting an R&D program in consultation with the SRF Department Head
- Mentoring undergraduate and graduate students
- Disseminate R&D results through peer reviewed papers and participation at conferences and workshops

Areas of research interest include:

- Supporting Niobium cavity fabrication
- Developing heating/doping recipes across a broad frequency range using rf induction oven and coaxial and elliptical resonators as characterized through cryogenic testing
- Proposing beam time and conducting material testing using muSR
- Coordinating installation of a new beamline for material testing with beta-NMR and initiating a research program
- Supporting proposals as required to further SRF knowledge

Minimum qualifications:

Our ideal candidate will have a recent PhD in electrical engineering, engineering physics, or a related field with experience in superconducting rf. Experience in any of the following areas will be considered definite assets: fundamental SRF, cavity testing, condensed matter probes, and electro-magnetic modeling capability. The ability to troubleshoot SRF systems, design SRF cavities, conduct research and provide mentoring for students. Good communication skills and planning abilities, technical writing skills, and the ability to work effectively as a productive team player are also of high importance.

We offer:

- A competitive postdoctoral hiring salary commensurate with experience
- An attractive benefits package
- An excellent opportunity to work in a modern accelerator engineering facility pursuing cutting edge fundamental and technical development

When submitting your application as detailed below, please include a list of publications, and arrange for 3

letters of recommendation to be sent directly to the email below.

TRIUMF is an equal opportunity employer committed to diversity in the workplace, and we welcome applications from all qualified candidates. Your complete application package should be submitted by email to recruiting@triumf.ca and will include the following in one complete PDF file:

- Subject line: Competition #613
- Employment Application Form
- Cover letter indicating salary expectations
- CV

Applications will be accepted until the position is filled.