



## Detector Development Simulation Specialist

[TRIUMF](#) is Canada's particle accelerator centre, and one of the world's leading laboratories 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.

At TRIUMF, we're passionate about accelerating discovery and innovation to improve lives and build a better world. Equity, diversity, and inclusion are integral to excellence and enhance our ability to create knowledge and opportunity for all. Together, we are committed to building an inclusive culture that encourages, supports, and celebrates the voices of our employees, students, partners, and the people and communities we serve.

Developing and deploying the best technology for seeing particles and how they interact, our [Science Technology Department](#) aims to assist the physics community in bringing to reality their experiments by providing technical resources for the design, construction, and commissioning of subatomic physics experiments. Currently, this department is in need of a Detector Development Simulation Specialist within its Instrumentation Physics Group. The primary focus will be supporting the conceptual design and associated research and development at the early stages of project development, and to support users in detector characterization. Specific responsibilities include:

- Developing simulations and associated reconstruction software, as well as design optimisation with finite element analysis tools, to support conceptual design of future projects
- Supporting operating projects by setting up simulation and analysis tools
- Supporting detector R&D at the prototyping stage, including: measuring detector performance and comparing to predictions; setting up electronics, cooling, data acquisition and other hardware for measurements; and analyzing results
- Maintaining software necessary for detector design (GEANT4, Fluka, Garfield++, finite element calculation tools)
- Maintaining computer hardware/systems such as Linux
- Training users, in particular students, in detector physics and data analysis

If this opportunity excites you, and you are looking to increase your experience in a high profile national research facility, we encourage you to apply. If you have a thorough understanding of particle detector concepts and design, and if you have the following knowledge, skills and qualifications, then our hiring committee will want to review your application.

- A recent PhD in particle or nuclear physics discipline, combined with a demonstrated track record of initiative and inventiveness in detector development and preferably recent post-doctoral experience
- Knowledge of physical processes important to the generation of signals inside detectors, and electronic circuits and techniques
- A good understanding of experimental subatomic physics, and extensive knowledge of data analysis and simulation tools in this field
- Demonstrated written and oral communications skills and the ability to train and mentor students
- Strong interpersonal skills, and the ability to effectively work as a team member and work with changing requirements and conflicting priorities

When submitting your application as per the details below, please include a list of publications, and arrange for 3 letters of recommendation to be sent directly to the email below.

All qualified applicants are encouraged to apply and will be given serious consideration, and in the case of equal qualifications, preference will be given to a Canadian Citizen or Permanent Resident.

TRIUMF is located on the south campus of the University of British Columbia in Vancouver, BC.

We offer:

- a comprehensive benefits package including health, dental, basic life insurance, disability insurance and defined benefit pension plan
- a competitive hiring salary range of \$60,000 - \$72,000 per annum; the actual offered salary will be based on the applicant's experience and internal equity, but will usually not exceed the upper limit of the range
- an excellent opportunity to enhance your career portfolio in a high profile national research facility.

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

- Subject line: 721
- [Employment Application Form](#)
- Cover letter indicating salary expectations
- CV

**Applications will be accepted until August 25<sup>th</sup>, 2019.**

**It is important to note that due to operation necessity, TRIUMF will as needed, make hiring decisions that could pre-empt the application closing date. Accordingly, we suggest candidates submit expressions of interest in a timely fashion.**

**Contact information:**

Email: [recruiting@triumf.ca](mailto:recruiting@triumf.ca)

Phone: 604-222-1047

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