

## **JOB DESCRIPTION**

### **Research Engineer – ATLAS ITk**

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More than a hundred Canadian researchers from across the country, are collaborating on an international experiment called **ATLAS** ([atlas.cern.ch](http://atlas.cern.ch)) at the Large Hadron Collider (**LHC**) near Geneva, Switzerland. The experiment is designed to help us find answers to the most fundamental questions about what the universe is made of and how it works. The SFU and TRIUMF ATLAS ITk group is responsible for the construction of 1000 improved silicon-based tracking detector modules, which will be mounted on carbon-fibre structures for installation in ATLAS.

#### **BASIC FUNCTION:**

The Detector Engineer is responsible for providing engineering and technical support for the design, prototyping, and production, of tooling for the testing and assembly of silicon detector modules for the ATLAS Inner Tracker (ITk) at SFU and TRIUMF. This includes development, preparation and use of state-of the art fabrication equipment and quality control systems.

#### **ORGANIZATIONAL RELATIONSHIPS:**

The position reports directly to the SFU/TRIUMF project leader and ITk project manager for ITk module production at SFU and TRIUMF. The position does not directly supervise personnel, however, close liaison with our team of technicians, other Canadian sites and partners in the broader ATLAS-ITk project is required.

#### **RESPONSIBILITIES:**

- Design, manufacture and quality control of tooling for production of silicon detector modules
- Development of quality control test setups and procedures for silicon module assembly
- Use and automation of state-of the art fabrication equipment (metrology equipment, wire bonder, robotic gantry, probe station, visual inspection)
- Provide feed-back at group meetings towards production process optimisation
- Report in Canadian and international ATLAS meetings on results

#### **KNOWLEDGE AND SKILLS:**

Ability to attend to details in all aspects of design, production, and quality control; 3D CAD design skills; Programming experience in C++, python or MATLAB, SolidWorks experience; understanding of electronics and electrical systems is an asset; Good organizational skills in keeping track of project progress; Ability to work effectively as a team member; Good interpersonal, oral and written communications skills.

#### **MINIMUM QUALIFICATIONS AND YEARS OF EXPERIENCE:**

Bachelor's Degree in engineering from an accredited Canadian program or equivalent. At least 2 years of relevant experience, or the equivalent combination of education and experience.

#### **COMPENSATION:**

Competitive salary can be expected and will be based on experience.

#### **APPLICATION:**

Interested individuals are asked to submit their application via email to: [stelzer@sfu.ca](mailto:stelzer@sfu.ca) and [lpoley@triumf.ca](mailto:lpoley@triumf.ca). Applications received by May 31st, 2021 will receive full consideration. Review of applications will continue until the position is filled.