



1545 Maley DR | Sudbury, ON | Canada P3A 4R7 | t. 705. 521. 8324 | f. 705. 521. 1040 | [www.norcat.org](http://www.norcat.org)

As a result of recent NASA and Canadian Space Agency contracts, the Northern Centre for Advanced Technology (NORCAT) has immediate opportunities in the Innovation and Development Department for motivated, organized individuals capable of working to tight dead lines, and working independently as part of a dynamic team. All applicants must be Canadian citizens and must have a valid Canadian passport or be eligible for one.

**Submit cover letter and resume to 1545 Maley Dr. Sudbury, ON P3A 3B4 Attn. S. Schmidt or email [sschmidt@norcat.org](mailto:sschmidt@norcat.org).**

### **Automation Designer**

This position requires the individual to develop control systems for terrestrial and planetary mining prototypes with a variety of sensors, actuators and motor drives. The individual would work closely with the mechanical and electrical design groups to effect an appropriate control system. In addition to excellent oral and written communication skills and Microsoft Office software competency, the individual should possess:

- Significant experience in writing control software, designing automated systems and computer networking
- Significant experience with MATLAB, Simulink, and Stateflow
- HMI development experience using RSVIEW
- an electronics background that includes a thorough knowledge of small motors and drives and a thorough understanding of sensors, transmitters, actuators
- Solid background in physics as applied to process controls
- The ability to troubleshoot logically and systematically to the circuit component level
- Good mechanical skills
- Moderate skill level with AutoCAD
- The ability to calibrate sensors and transmitters
- The ability to check, calibrate and troubleshoot small motor drive circuits

### **Electronics/Electrical Engineer/Technologist**

This position requires the individual to design and implement electronic/electrical components and interfaces for projects under development in the department. A degree or diploma in electrical or electronics engineering is required. The individual should possess many or all of the following:

- an understanding of circuit design, automatic control fundamentals, principles of autonomy, SCADA and finite state machines
- competence with CAD, C+ programming, Matlab/Simulink/Stateflow, Excel and Word
- an understanding of sensors, actuators, robotics, motor drives, small electric motors, types of power supplies
- excellent troubleshooting capabilities

### **Mechanical Designer/Engineer**

This position requires the individual to perform detailed mechanical designs and follow the implementation of these designs through to prototype fabrication, assembly and testing. Working as a member of the mechanical design team, the incumbent is expected to focus work primarily on detailed designs arising from concepts developed during early design stages. The incumbent must be capable of assuming any and all tasks related to the effective tracking and quality assurance of the fabrication and assembly process. The individual should possess:

- a working knowledge of mining equipment such as drills, crushers and material handling equipment.
- exceptional knowledge in machining, metal fabrication and welding.
- the ability to assemble components after fabrication
- a solid working knowledge of Mechanical Desktop, Pro E, or AutoCAD
- an understanding of sourcing and purchasing of components and parts
- an understanding of Finite Element Analysis
- an ability to select and identify materials appropriate to the designs under way