



McGill

Department of Physics

October 30th, 2020

Academic Associate Position in Experimental Particle Physics

ATLAS Experiment

The particle physics group at McGill University has an opening for an academic associate position to work on the ATLAS experiment project. ATLAS is a multi-purpose detector located at the Large Hadron Collider (LHC) at the CERN international laboratory in Switzerland and dedicated to the study of fundamental matter and interactions.

The ATLAS-McGill group is contributing to the Trigger and Data Acquisition (TDAQ), Muon New Small Wheel Phase-1 upgrade, Liquid Argon calorimeter detector Phase-2 upgrade, and data analysis with interests in Standard Model physics, QCD, Higgs measurements and searches for new physics phenomena.

Position Description:

The position is two-fold. One part is to help fulfill our institutional commitments for the ATLAS collaboration on TDAQ. The other part is to take on a leading role in data analysis in an area compatible with the group's activities. The scientist will work closely with group members: principal investigators (PIs), postdocs and graduate students. The scientist would be based full-time at CERN. The main roles and responsibilities are:

- **TDAQ:** Join the ATLAS collaboration efforts in TDAQ.
- Interact with ATLAS experts and PIs to identify critical tasks to be undertaken such as the coordination of the trigger menu or the definition of trigger signatures.
- Help define the tasks, set their priorities and their sharing within the working team.
- As needed, develop tools to execute them and provide documentation.
- Assist team members in TDAQ with the planning of daily activities and helping to develop project scope and areas of responsibility.

- **Analysis:** Liaise with the PIs to identify timely physics analysis topics, which could be Standard Model, Higgs, QCD or Jet Physics related, in their relevant physics groups.
- Design the analysis paths and oversee responsibilities in the chosen physics groups.
- Interact with group members, especially students, on their own research topics.
- Be a resource person for tools and methods required and insure the availability of the needed resources in the chosen physics groups. Lead troubleshooting.

- **ATLAS:** Identify opportunities for improvements or new developments.
- Keep records, lead meetings, maintain and promote collaborations within the TDAQ team or the analysis groups.
- Report regularly to the ATLAS collaboration and take the lead in preparing reports and publications of the research results.

Required Qualifications:

The applicant must have a strong research record in particle physics and an excellent background in computing, software algorithms and data analysis techniques. Required qualities are: exceptional communication skills with the ability to build relationships at all levels, demonstrated scientific writing skills, strong organizational, time management and administrative skills with emphasis on accuracy and attention to detail, ability to identify and solve problems, analyze data and implement or troubleshoot solutions, ability to work independently and in a team environment. Previous experience in ATLAS would be an asset.

The candidate must also have received a PhD in Experimental High Energy Physics within the past five years and have demonstrated a strong potential for outstanding achievement as an independent researcher.

Application Procedure:

Interested applicants can only apply through Workday and must include the following documents: (1) a cover letter including the motivation for applying to this position, (2) a curriculum vitae with a description of the research experience, the latter containing a list of three referees who accepted to write letters of recommendation, with their coordinates.

Workday direct application link:

https://mcgill.wd3.myworkdayjobs.com/en-US/mcgill_careers/job/Rutherford-Physics/Academic-Associate--Position-in--Experimental--Particle--Physics_JR0000005224

In order to accelerate the selection process, please also send a copy of the above two documents as well as arrange for the three letters of reference to be e-mailed directly to Prof. François Corriveau at corriveau@physics.mcgill.ca.

Applications will be accepted starting immediately until the position is filled. The review will begin on December 7th, 2020. The initial appointment will be for one year, renewable yearly for one year upon mutual agreement and subject to funding, up to a maximum of five years.

*Department of Physics of McGill University: <http://www.physics.mcgill.ca>
Experimental High Energy Physics Groups: <http://www.physics.mcgill.ca/xhep>*

McGill University is committed to equity and diversity within its community and values academic rigour and excellence. We welcome and encourage applications from racialized persons/visible minorities, women, Indigenous persons, persons with disabilities, ethnic minorities, and persons of minority sexual orientations and

gender identities, as well as from all qualified candidates with the skills and knowledge to engage productively with diverse communities.

At McGill, research that reflects diverse intellectual traditions, methodologies, and modes of dissemination and translation is valued and encouraged. Candidates are invited to demonstrate their research impact both within and across academic disciplines and in other sectors, such as government, communities, or industry.

McGill further recognizes and fairly considers the impact of leaves (e.g., family care or health-related) that may contribute to career interruptions or slowdowns. Candidates are encouraged to signal any leave that affected productivity, or that may have had an effect on their career path. This information will be considered to ensure the equitable assessment of the candidate's record.

McGill implements an employment equity program and encourages members of designated equity groups to self-identify. It further seeks to ensure the equitable treatment and full inclusion of persons with disabilities by striving for the implementation of universal design principles transversally, across all facets of the University community, and through accommodation policies and procedures. Persons with disabilities who anticipate needing accommodations for any part of the application process may contact, in confidence, this email or phone at 514-398-2477.

All qualified applicants are encouraged to apply; however, in accordance with Canadian immigration requirements, Canadians and permanent residents will be given priority.