

The Particle Physics Department (DPNC) of the University of Geneva invites applications for a

## Doctoral Assistant

position on the ATLAS Experiment at the Large Hadron Collider at CERN in the group of Prof. Tobias Golling. The DPNC ATLAS group is significantly contributing to the ITk Pixel construction, and more specifically to the Outer Barrel part. The DPNC has a long tradition of working with silicon detectors for former experiments such as ATLAS SCT, AMS, DAMPE and ATLAS IBL while taking some leading roles in the design, the construction and the integration. In addition, the group is contributing strongly to various physics analysis and performance working groups, as well as the operation of the experiment, in particular the Pixel detector. Furthermore, the Geneva group has vast expertise in machine learning approaches for predictive, generative and anomaly detection models.

The selected candidate with a hardware-oriented profile will be mainly working on the ITk construction, and expected implications include:

- ITk qualification and construction of the various deliverables that Geneva is engaged in.
- Set-up, with the rest of the team, qualification test benches for electrical module characterizations, as well as for services and integrated structures.
- Take a leading role within the DPNC and participate actively to the ITk Pixel working meetings and liaise with the collaborators abroad and at CERN.
- Strengthen and consolidate the collaboration between the DPNC and CERN for the common ITk activities.
- Make or adapt the analysis tools for reports, documentations and the production database.
- Liaise with the rest of the local teams and with the engineers for communicating the progress and issues.
- Depending on the progress, a machine learning project or physics analysis will be possible for a limited fraction of the time.

The successful PhD candidates have (or soon receive) the equivalent of a master's degree with a specialisation in particle physics or related activities as well as outstanding grades.

Useful skills for this position include:

- Experience in particle physics research.
- Experience in Silicon sensor instrumentation.
- Experience in hardware systems in term of readout and electronics.
- Software programming skills and analysis.
- Ability to work as a team member to accomplish goals.
- Excellent written and oral communication skills.

The job includes teaching duties as well as opportunities for supervision of undergraduate students and outreach work. Doctoral candidates will normally complete their doctoral requirements within 4 years. Non-francophone candidates are encouraged to achieve proficiency in French.

**To apply please provide a CV, a motivation statement, and at least two reference letters** to [Sergio.Gonzalez@unige.ch](mailto:Sergio.Gonzalez@unige.ch). Applications should be received by **November 13, 2023** and the position is expected to start as early as February 2024. For further information please contact [Tobias.Golling@unige.ch](mailto:Tobias.Golling@unige.ch), [didier.ferrere@cern.ch](mailto:didier.ferrere@cern.ch) or [Sergio.Gonzalez@unige.ch](mailto:Sergio.Gonzalez@unige.ch).