



PhD position at the University of Freiburg (ATLAS experiment)

We are seeking a **highly motivated and enthusiastic PhD candidate** to conduct research at the interface between particle physics and cosmology in the ATLAS experiment at the Large Hadron Collider at CERN.

The main topic of the position will be the search for heavy Higgs bosons, which will shed light on the **connection between the Higgs sector and the matter-antimatter asymmetry in the Universe**. Work on the improvement of the identification of b -jets or Monte-Carlo event generators is also foreseen. Participation in the operation of the ATLAS detector with frequent travels to CERN is expected. The position will be based at Freiburg.

Applicants should hold or be about to obtain a Master's degree with excellent grades in particle physics and be highly motivated to work in an international research environment. Familiarity with computer programming (especially C++ and/or Python) and analysis software frameworks like ROOT is expected.

The position is expected to begin as soon as possible. Applications which are complete and will be received until November 30 will be given full consideration, however applications will continue to be processed until the position has been filled.

The **application documents** should be sent directly to spyridon.argyropoulos@cern.ch and should include the following documents:

- curriculum vitae
- cover letter stating the research interests and motivation to become part of the programme
- copy of Master's and Bachelor diplomas
- official grade transcripts of Master's and Bachelor diplomas with a description of the grading scheme
- copy of Master's thesis
- two letters of recommendation which should be sent by the referees to the above email address

The successful candidate will be integrated in the Emmy-Noether independent junior research group "The Higgs boson as a window to the Dark Universe", which aims to exploit the recently discovered Higgs boson in order to investigate the major open problems of the dark universe: baryogenesis, dark matter and dark energy. The research group is hosted by the group of Prof. Dr. Karl Jakobs/Dr. Christian Weiser, which has held leading roles in the ATLAS experiment. The successful candidate will furthermore be part of the Research Training Group "Mass and Symmetries after the Discovery of the Higgs Particle at the LHC", which brings together experts from direct dark matter detection experiments, high-energy physics experiments and theorists, providing further training opportunities via regular seminar series and workshops.

Candidates are selected in accordance with the provisions of the AGG (Allgemeines Gleichbehandlungsgesetz - German General Equal Treatment Act). Applicants with disabilities (Schwerbehinderte Menschen) will be given preferential consideration in case of equal qualification.

For further inquiries please contact Dr. Spyridon Argyropoulos spyridon.argyropoulos@cern.ch