



The **ATLAS Group at the University of Freiburg (Prof. Dr. Gregor Herten)**

has an opening for a **PhD position**.

Our group has a long-standing expertise in searches for Supersymmetry, top-quark and Higgs-boson physics and is also engaged in the upgrade of the ATLAS muon spectrometer. The focus of the activities of the successful applicant will be on the analysis of the full Run-2 dataset taken by ATLAS.

A major goal of our research group is the measurement of top-quark properties, with a focus on the top-quark mass in top-antitop quark pairs and the top-Higgs Yukawa coupling in the associated production of a top-quark pair and a Higgs boson with the Higgs boson decaying into two b-quarks. In our research activities, we are using state-of-the-art machine-learning techniques in order to improve signal identification and remove physics background and combinatorial background.

The successful applicant will be integrated in the Freiburg analysis group and will be supervised by experienced postdocs. Participation in general ATLAS activities of the Freiburg group (Monte Carlo production, b-tagging, detector operation) is expected. Most of the PhD project will take place in Freiburg, with the possibility to spend up to one year at CERN.

The PhD candidate will be integrated into the Freiburg Research and Training School on „Mass and Symmetries after the Discovery of the Higgs Particle at the LHC“.

The position is available from **1st December, 2019**.

Applications should be sent to andrea.knue@physik.uni-freiburg.de until the **15th November 2019**, and should include a curriculum vitae, copies of certificates of degrees, a letter of motivation, a link to the master or diploma thesis and the names and contact addresses of two persons who could provide letters of reference.

Further information can be obtained from:

Dr. Andrea Knue (andrea.knue@physik.uni-freiburg.de)

Prof. Dr. Gregor Herten (herten@uni-freiburg.de)