

Higgs boson physics with the ATLAS experiment of the LHC

Research Project / Research Group Description:

The ATLAS research group at IFIC is contributing to different data analysis studies of the ATLAS experiment. It is particularly active in the Higgs boson physics domain, contributing to several recent results in this area, including the discovery of the Higgs boson itself. Moreover the group has contributed to the construction of the Tile Hadron Calorimeter (TileCal) of the ATLAS detector and is responsible of the present and future operations of the back-end electronics of the calorimeter.

The research group has an outstanding track record of Ph.D. students formation. Our alumni have been awarded with distinctions including Extraordinary Prize of the Ph.D. school of the University of Valencia, ATLAS Thesis Award, European Distinction, etc. and have found high standing positions in the particle physics community and in the industry.

Job position description:

We are looking for excellent candidates to perform a Ph.D. within the ATLAS group of the University of Valencia for the study of the sector of the Higgs boson, the last particle of the Standard Model of particle physics to be discovered. The Higgs boson is the particle responsible of the symmetry breaking of the electro-weak interactions and of the mechanism giving mass to elementary particles.

The work will concern exciting measurements of the elusive Higgs boson and physics beyond the Standard Model. The successful candidates will become members of ATLAS collaboration, participate in the data taking, contribute to the hardware and software development of the ATLAS detector and perform physics data analysis. A part of the Ph.D. activities are expected to be done at CERN, the largest particle physics laboratory in the world.

Applicants need to have interest in the analysis of particle physics data, be capable of personal initiative and be willing to be involved in one of the largest scientific experiments in the world.

Group Leader: Luca Fiorini

Luca.Fiorini@cern.ch

Research project/Research Group website

<http://ific.uv.es/>