

PhD Positions in the ATLAS/future collider group at IFIC Valencia

Opening Date: **August 1st, 2022**

Closing Date: **October 1st, 2022**

The IFIC ATLAS/future collider group

The AITANA group at IFIC (UV/CSIC) in Valencia is active in the ATLAS and MoEDAL experiments at the CERN Large Hadron Collider, in the development of accelerator and detector technology for a future electron-positron Higgs factory and the LUXE experiments and in axion searches with RADES. The ATLAS analyses focus on searches for new physics and top quark precision measurements. The group is deeply involved in prospect studies for future colliders in the same areas. Detector R&D on highly granular calorimetry is performed within the CALICE collaboration and integrated pixel sensors are being developed within the AIDAInnova project. Accelerator R&D aims at the development of high-gradient RF cavities and beam instrumentation, both within the ILC and CLIC projects and for medical applications.

More information about the group is available on the webpage: <https://aitanatop.ific.uv.es/aitanatop/>

Learning environment

Our interdisciplinary group provides a stimulating environment for highly motivated students to master the multiple aspects of modern experimental high-energy physics. The group is internationally recognized and has excellent ties to the theory department at IFIC and theory groups elsewhere. The group has collaboration agreements with the main particle physics laboratories in Europe and Japan and funding for secondments at CERN, DESY and KEK is available.

Open positions

The group has one or more open positions for Ph.D. students. The selected student will enroll in the doctoral programme at Valencia University and will be based in Valencia, with extended stays in one of the major labs. He or she will participate in one of the main research lines of the group. The concrete programme for the Ph.D. will be agreed as a function of the interests of the successful candidate within the broader programme of the group.

Funding and pay

The group is funded under the Spanish national programme for particle physics, under several European projects (AIDAInnova, EAJADE, CompactLight), and has a substantial PROMETEO grant from the Valencian regional government. The appointments will be made through the Spanish Research Council CSIC and extend up to the PhD (with a maximum of 4 years). The gross salary is equivalent to Ph.D. scholarships in Spain and amounts to approximately 23.000 euro/year, including social security and health insurance.

Requirements

A master of science (MSc) or equivalent degree in physics is required to be considered for this position. Engineers with a solid basis and interest in physics can apply for the research lines on detector and accelerator technology. Knowledge of particle physics and strong programming skills (C/C++ or Python), and experience in one of the research lines of the group, are an advantage. The candidate needs to possess excellent English communication skills, while Spanish or Valencian are appreciated, but not required.

Applications

Interested candidates should send their **up-to-date CV**, including a **full list of University Grades**, and arrange to have **two letters of reference** sent to Dr. Vasiliki Mitsou (vasiliki.mitsou@ific.uv.es). Inquiries about the group, the selection process and the LHC analyses can be directed to Vasiliki Mitsou (vasiliki.mitsou@ific.uv.es), inquiries about the detector R&D programme to dr. Adrian Irles (adrian.irles@ific.uv.es), about the accelerator R&D activities to Daniel Esperante (daniel.esperante@ific.uv.es) and about axion searches to prof. Benito Gimeno (benito.gimeno@uv.es). Selected candidates will be contacted for a (online) follow up interview.