



## Call for Candidates

### Experimental Nuclear Physics Staff Scientist

The Laboratory for Studies and Applications of Nuclear Reactions (LEARN) is opening a staff scientist position for an outstanding physicist in the field of experimental nuclear physics with a focus on nuclear reaction studies and applied nuclear physics.

LEARN is part of the Nuclear Physics Division (DPHN) of the Institute of Research into the Fundamental Laws of the Universe (Irfu) located at CEA Paris-Saclay (France). Irfu is a highly dynamic scientific environment including research divisions on particle physics and astrophysics, as well as very strong technical and engineering divisions with top-level skills in instrumentation, cryogenics and accelerator technologies. This concentration of resources allows the scientific teams to have a leading role in many physics program all around the world. Inside Irfu, DPHN focuses its research on the nucleon and the nucleus, with studies ranging from nuclear structure and reactions to hadron structure and quark gluon plasma.

LEARN is composed of 9 permanent staff physicists conducting worldwide-recognized research on nucleon induced reactions, fission and reactor neutrino physics and aiming to answer both fundamental questions in physics but also to provide accurate data and models for applications with societal benefits. A recent and important application in which Irfu is playing a leading role is the development of compact accelerator-based neutron sources (CANS). Such developments require a full knowledge of the physics, starting from the primary beam interaction on the target to the neutron transport, to optimize the performances of the source in terms of neutron flux.

The candidate is expected to take a significant part in the development of CANS. She/He will be mainly involved in the optimization of the moderator with an intermediate goal of improving the accuracy of the simulations. In that respect, improvements of the modeling tools and their validations with measurements are expected. The candidate will be integrated in the experimental team working on nuclear reactions induced by neutrons. Besides the development of CANS, she/he will have the opportunity to actively contribute to the experimental program on the fission process by participating to the future experiments at ILL and NFS(Ganil), developing new instrumentation and proposing new experiments.

A Ph.D. in nuclear physics is required with preferably one (or more) postdoctoral experience even though it is not mandatory. A solid background in low-energy nuclear physics and in particular in nuclear reactions is requested. Good skills with Geant4 simulations are required and experience with neutron physics, nuclear modeling and instrumentation would be beneficial. The candidate should be sufficiently open-minded to work in basic and applied nuclear physics environments and be willing to take initiatives.

Candidates should send a cover letter describing their research activities and research project (2-3 pages), a Curriculum Vitae, a list of publications (or talks in conference), at least two letters of recommendation, and when applicable a copy of their PhD thesis as well as the jury reports on their manuscript and/or PhD defense.

Complete applications should be sent preferably in pdf format by e-mail to [danielle.coret@cea.fr](mailto:danielle.coret@cea.fr) or alternatively by postal mail to:

Danielle CORET  
CEA-Saclay Irfu/SPHN Bat 703  
F - 91191 Gif-sur-Yvette cedex France

For full consideration, all application materials must be submitted by February 16<sup>th</sup> 2018. A committee will release the list of selected candidates for an interview beginning of March 2018. Interviews are foreseen before beginning of April 2018.

For further information about this position please contact Alain LETOURNEAU ([alain.letourneau@cea.fr](mailto:alain.letourneau@cea.fr)).

