February 1st, 2017

The LHCb group of the Laboratoire de Physique Nucléaire et des Hautes Energies (LPNHE) in Paris (France): [https://lpnhe.in2p3.fr/](https://lpnhe.in2p3.fr/) invites applications for two Doctoral Student positions funded by the ERC-COG project RECEPT (GA 724777) to work on the LHCb experiment.

The LHCb experiment at CERN is collecting data from the proton-proton collisions delivered by the Large Hadron Collider. The LPNHE LHCb group consists of seven permanent staff and two PhD students, and is currently involved in two main domains of data analysis, the study of charmless three body B decays and rare decays, as well as work on charged particle reconstruction activities for the Scintillating Fibre detector of the LHCb upgrade.

The RECEPT project aims to make the world’s most precise measurements of $e^{-}\mu^{+}$ and $\mu^{-}e^{+}$ lepton universality in the beauty and strange sectors, exploiting data taken with both the present and upgraded LHCb detector. The latter is a particular challenge as the upgraded LHCb detector will have to process, in real time, 5 TB of data per second, and perform most of the physics data analysis within this real-time system. RECEPT’s researchers will therefore conduct R&D into novel reconstruction and data processing techniques, and subsequently deploy them in order to allow the upgraded LHCb detector to reach its full potential.

The successful candidates are expected to both play a leading role in testing lepton universality in $b\to sll$ or $b\to c\ell\bar{\ell}$ transitions, and to make a significant contribution to the development of the reconstruction and data processing for the upgraded LHCb detector. To qualify, the candidates should have, or be about to obtain, a Master’s degree in Physics. Interested applicants should submit a two-page curriculum vitae, a one-page statement explaining their interest in the position, and arrange for two letters of recommendation.

Applications will be accepted until March 15th 2017. The successful candidates will be enrolled in the STEPâ€”TUP ("Sciences de la Terre et de l’Â©nvironnement et Physique de l’Â©nivers, Parisâ€”Tâ€”Univers) doctoral school, and will be funded for exactly three years. They will have access to a dedicated travel budget and there is the possibility of a 6-12 month stay at CERN during the course of the project. Additionally, students will normally be expected to make short trips to CERN for data-taking activities and meetings.
No nationality restrictions apply to this position. LPNHE is an equal opportunity employer, and members of marginalised groups are particularly encouraged to apply.

For further information contact Vava Gligorov (vgligoro@lpnhe.in2p3.fr). Application documents and references should be sent to the same address.