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Read carefully !

LPNHE offers a dozen PhD proposals to start in October 2019. Some of these proposals are already funded. They are labelled as "Funded PhD proposals" below.

Fundings for "Other PhD proposals" is not guaranteed, but several possibilities for fundings do exist: successful application to the competitive entrance examination of Ecole Doctorale STEP'UP (more information at the bottom of this page), grants by ANR, Région Ile de France, etc. Students interested by a particular topic are invited to contact the advisor(s) who will explain the possible options. LPNHE should get between 4 and 6 grants for these "Other PhD proposals".

A pre-PhD internship is proposed for each and every topic listed below.

List of PhD proposals for a start in October 2019

Funded PhD proposals

- [Measurement of the Higgs boson properties and of its coupling to the quark bottom and W/Z bosons in the lepton\(s\)+bb+X final state](#)
- [Search for CP violation in the T2K long baseline accelerator neutrino experiment](#)
- [Search for light dark matter and exploration of the dark sector with the DAMIC-M detector](#)

Other PhD proposals

Masses and fundamental interactions

- [Study and realization of a High Granularity Timing Detector \(HGTD\) for the ATLAS detector for the High Luminosity phase of the LHC](#)
- [Absolute calibration of jets and search for new physics with the ATLAS experiment](#)
- [Identification of boosted Higgs bosons for searches of new physics and improvement of the ATLAS tracker for the high luminosity phase of the LHC](#)
- [Search and prospects for the discovery of di-Higgs production and measurement of the Higgs boson self-interaction in the bb to gamma gamma final state](#)

Matter-Antimatter Asymetry

- [Search for charged lepton flavor violating decays with the LHCb experiment](#)

Cosmic Rays and Dark Matter

- [DarkSide: looking for dark matter with liquid Argon](#)
- [Search for Dark Matter from XENONnT data](#)

Cosmology and Dark Energy

- [Characterization of Dark Energy with Subaru and HST](#)

- [Constraining atmospheric transmission for the new generation of Astronomical Surveys](#)

Grants from Ecole Doctorale STEP'UP

In case of an application for a grant with Ecole Doctorale STEP'UP, the grants will be distributed over two competitive entrance examinations, provided the candidates have successfully obtained their master's degree.

The first examination will take place in February 2019 according to the following procedure:

Until 28 January 2019 : application delivered by the advisor to the Ecole Doctoral secretary. Interviews with the candidates in mid-february 2019. Ranking and results following the interviews.

The second examination will take place in June following the same procedure (deadline for applications: 11 June 2019). Please have a look [here](#).

The list of documents to provide is available [here](#).

These documents and the interview are to evaluate candidates qualities, the quality of the proposed PhD topic, but also the good match between the candidate and the topic.