

**« Chaire de professeur junior » - CNRS/IPP ;
Tenure-track position at the
Laboratoire Leprince-Ringuet, IN2P3, École polytechnique**

The Laboratoire Leprince-Ringuet (LLR) invites applications for a CNRS tenure track position in particle physics. The LLR is a laboratory of the IN2P3 and of the École polytechnique, one of the engineer schools of the Institut Polytechnique de Paris (IPP). It is dedicated to fundamental physics research in high energy and particle physics as well as to astroparticle physics. It is involved in the LHCb and CMS experiments at the LHC, the T2K, SK and HK neutrino experiments in Japan, and in FERMI, HESS and CTA for gamma-astronomy.

The CNRS/IPP tenure track opening is in the new “*Chaire de professeur junior*” (CPJ) framework. During the first 4 years, the holder of the CPJ will combine scientific research at the LLR and lecturer teaching at the prestigious École Polytechnique. He or she will obtain additional financial support for a PhD student and a postdoc. The research is expected to be carried within the CMS experiment at the LHC. After four years, the CPJ opens to a permanent position as “*Directeur de Recherche*” of the CNRS (equivalent to a full professor) with additional teaching remaining a possibility. A successful candidate will have a Ph.D. and solid postdoc experience in high energy and particle physics, and is expected to bring leading contributions to the experimental programs of the LLR. The positions can begin as early as September 1, 2022, pending administrative and budgetary approval.

The holder of the CPJ will have the opportunity to have a major impact in high energy and particle physics at the CNRS and the IPP by drawing on the experience of the CMS group of physicists and engineers. CMS is a flagship project of the LLR and of IN2P3 with high potential for major new discoveries. The group physics actual focus concerns the spontaneous electroweak symmetry breaking, the scalar sector and related issues within and beyond the Standard Model. The group remains at the forefront of the experiment at all stages from detector developments to trigger and physics analysis. It is involved in the R&D and construction of the new high granularity calorimeter for CMS concerning the mechanics, electronics and trigger. It has been a protagonist of the Higgs (H) boson discovery and has brought since then continued high-level analyses for the H boson characterisation in various decays channels and for constraining the H boson self-coupling.

The holder will have the opportunity to contribute to detector R&D, and develop new strategies for reconstructing and analysing using, among other things, multivariate methods (machine learning, artificial intelligence, etc.) and the most advanced statistical methods. He or she is expected to take lead existing or novel analysis and develop new research avenues within the CMS experiment. He or she will also have the opportunity to develop a teaching project in the high-energy physics or the computational physics master degree program.

Interested candidates should provide:

1. a curriculum vitae including a list of key publications,
2. a description of current and planned research activities,
3. a discussion of current and possible teaching and outreach activities,
4. the names of three references.

The documents should be sent by the Friday 6th of May in a .pdf file to cpj@llr.in2p3.fr .

The position is expected to start in early fall 2022. The applicants will be asked to download documents on a specific CNRS web site at a later stage for the selection committee¹.

For further information on the CPJ position and more details on the selection procedure, please contact:

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For further information about the CMS team at the LLR, please contact Florian Beaudette, Florian.Beaudette@llr.in2p3.fr or Roberto Salerno, Roberto.Salerno@cern.ch .

¹ The selection committee will include representatives of the CNRS, the IN2P3, the IPP and the LLR, as well as external experts. Information on the precise procedures and key dates shall be provided soon.