



LABORATÓRIO DE INSTRUMENTAÇÃO E FÍSICA EXPERIMENTAL DE PARTÍCULAS

The LIP-CMS group has an immediate opening for a Postdoctoral Research Fellowship to join the team in the project “Collaboration in the operation and physics data analysis at the CMS experiment at CERN”, CERN/FIS PAR/0025/2019, financially supported by FCT/MCTES.

Job description

The call for Postdoctoral Research Fellow position is intended for participation in the CMS experiment at the LHC under the following conditions:

1. Scientific Research Field: Physics

2. Application Requirements:

The candidates for the position should have obtained a PhD in Physics within less than three years and provide a clear demonstration of the ability to carry out an independent research program. The successful candidate will perform scientific work in an internationally competitive environment.

3. Work Plan

The LIP-CMS group is involved with a leading role in data analysis (Top, B, quarkonium, heavy ions, Susy, exclusive production, and Higgs) and in the HL-LHC detector upgrades for Phase2 (ECAL and MTD). At LIP, we operate a Tier-2 computer center, provide resources for data analysis both locally and as a part of the CMS computing grid.

The successful candidate will participate in the data analysis of the full dataset available with the goal of fully exploiting the discovery opportunities offered by the LHC in the search for New Physics. The activity is centered on Run2 data and preparation for a leading contribution in the LHC Run3 data analyses. The physics program focuses on studies of rare decays and Top quark measurements in the search for New Physics with an emphasis on Lepton Flavor Violation. The successful candidate is expected to play a major role in the analysis effort.

The work plan will be carried out in the framework of the activities of the LIP group in the CMS experiment, one of the outstanding research groups in High Energy Physics in Portugal. In the Report of the recent Institutional Evaluation performed by an international review panel nominated by FCT the quality of the LIP-CMS group was explicitly recognized: “The CMS group, while small in size, is really outstanding and world-class. A member of LIP was deputy spokesperson of the CMS collaboration at the time of the Higgs discovery, and has supplied physics working group co-conveners of the CMS Higgs Physics analysis, the Top Quark Physics analysis and the CMS B and Quarkonium Physics group. This is a remarkable achievement for such a small group, to be leading three of the most important physics analysis groups.”

4. Legislation: The contract will be written according to the Portuguese legislation (Law 7/2009, 12 February).



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- 5. Place of work:** Research activities will be based in Lisbon with occasional trips to CERN.
- 6. Duration:** The position will have the initial duration of 12 months and could be extended pending successful assessment and of funding availability.
- 7. Monthly Amount:** According to FCT table of Fellowships stipends values.
- 8. Selection methods:** Curriculum evaluation (weight 50%), three recommendation letters (weight 20%) and an interview (weight 30%).
- 9. Jury Panel:**
Prof. João Varela, Dr. Nuno Leonardo, and Dr. Michele Gallinaro
- 10. Notification of results:** The final evaluation will be published through the list ordered according to final score and the successful candidates will be notified by e-mail.
- 11. Documents:** Applicants should send a CV and a statement of research interests, all in one pdf file, and arrange for three letters of recommendation to be sent to: natalia@lip.pt.
- 12. Period of application:** Deadline is April 20, 2020. Review of applications will continue until the position is filled.