

Predocctoral position in Experimental Particle physics at CIEMAT (Madrid)

Studies of Higgs boson properties and search for new physics signals with the CMS experiment at the CERN LHC

The CIEMAT-Física de Partículas (CIEMAT-FP) María de Maeztu Excellence Unit announces the upcoming opening of a predoctoral position for an outstanding young MSc graduate interested in working in the CIEMAT-FP group collaborating in the CMS experiment towards a PhD Thesis.

The candidates must have a Master's Degree in Physics or a 5-year Physics Degree ("Licenciatura") at the time of appointment. Main considerations for selection are excellent grades, very good English knowledge and a strong interest in the scientific field of High Energy Physics at the energy frontier. The experience in modern programming languages such as C++, python and scripting languages will be valued.

The 4-year PhD contract (Personal Investigador Predoctoral en Formación) is funded by CIEMAT. The official call will be published at the CIEMAT Job Vacancies webpage <http://www.ciemat.es/portal.do?IDM=290&NM=2> during the summer-early autumn of 2016. It will also be announced at <http://cfp.ciemat.es/predoc> referring to the respective official call.

The CIEMAT-FP group is actively participating in the CMS experiment at the Large Hadron Collider at CERN. Since the discovery in 2012 of a new particle consistent with being the Higgs Boson predicted in the standard model (SM), a full characterization of its production and decay properties is deemed needed to establish the ultimate nature of this particle. The high statistical data sample that will be collected during Run II of LHC will allow the measurement of the Higgs boson properties with largely improved precision. Should any of its properties reveal to be inconsistent with the predictions, would indicate the path towards a possible extension of the SM.

The successful candidate will be integrated into one of the specialized working groups participating in this effort. He/she is expected to collaborate to optimize the full analysis stream, from the event selection procedure, evaluation and subtraction of remaining backgrounds, until the final statistical analysis of the data, together with a careful estimation of the associated systematic uncertainties. The candidate is also expected to participate in common group activities such as data taking control and detector performance studies.



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EXCELENCIA
MARÍA
DE MAEZTU

2016-2019



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física de partículas

We offer close supervision and a stimulating international environment, with expected research stays at CERN for presentation and discussion of results at working meetings, and data taking shifts, advanced training in the field participating in highly specialized workshops and schools, and attendance to international conferences with the possibility to present his/her scientific results on behalf of the collaboration.

For any further questions, please contact Nicanor.Colino@ciemat.es

The CIEMAT Particle Physics Unit of Excellence is an affirmative action/equal opportunity employer. Eliminating gender inequalities by promoting equal opportunities for men and women is a core compromise of our group and it is our commitment to establish the necessary actions to close the gender gap.