

## **POSTDOCTORAL RESEARCH POSITIONS**

### **Postdoctoral Scientist Position**

The cosmology group is opening a postdoctoral research position, financed by the theComunidadAutónoma de Madrid, through the HEPHACOS programme, with the following characteristics:

Candidates will be required to conduct original research in the field of theoretical cosmology, particularly on late universe evolution and the nature of dark energy. While they must be capable of independent work, their research must be coherent with the general research program of existing research groups at the IFT.

**CLOSED**

### **Postdoctoral Scientist Position**

Candidates will be required to have their PhD in theoretical physics, being able of conducting original research in the field of particle physics. The candidate will carry out research tasks analyzing the 'mu from nu' supersymmetric standard model (munuSSM) proposed by the group, in the light of LHC recent experimental results where a Higgs boson has been detected. In particular, the candidate will focus on several processes predicted by the munuSSM that could be observed in the LHC data in case that the Higgs detected is not the one of the standard model and corresponds to one of those present in supersymmetric theories.

**CLOSED**

### **Postdoctoral Scientist Position**

Candidates will be required to have their PhD in theoretical physics, being able of conducting original research in the field of theoretical cosmology, particularly on the phenomenology of dark

energy and the development of Boltzmann codes to extract the predictions of non-standard cosmological models. The successful candidate will focus on the development/adaptation of a C (or C++) codes to compare inhomogeneous cosmological models of the LTB type with cosmological observables, including large angle CMB temperature spectrum, as well as theories of modified gravity in the Einstein frame based on disformal relations. Experience in these or related areas is required.

**CLOSED**

### **Postdoctoral Scientist Position**

The Lattice Theory group is opening a postdoctoral research position, financed by the Comunidad Autónoma de Madrid, through the HEPHACOS programme, with the following characteristics:

Candidates will be required to conduct original research in the field of Lattice Gauge Theory, focusing in particular in the analysis of viable mechanisms for electroweak symmetry breaking involving strongly coupled theories. For that the candidates should have a solid background on Lattice Field Theory, non-perturbative and computational techniques, and have proved research experience in these fields.

**CLOSED**

### **Postdoctoral Scientist Position**

Candidates will be required to conduct original research in the field of QCD scattering amplitudes, particularly on the high energy Regge limit of large center-of-mass energy. While they must be capable of independent work, their research must be coherent with the general research program of existing research groups at the IFT.

## **CLOSED**

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### **Postdoctoral Scientist position**□

Candidates will be required to have experience in simulation tools for LHC physics (Pythia, FastJet, etc.) and Bayesian techniques and tools (particularly MultiNest), besides expertise in supersymmetric phenomenology and Dark Matter physics, in order to participate in a research project consisting in optimizing the possibilities of detection and identification of supersymmetry at LHC.

## **CLOSED**

### **HEPHACOS Postdoctoral Scientist position**□

The cosmology group is opening a postdoctoral research position, financed by the the Comunidad Autónoma de Madrid, through the HEPHACOS programme, with the following characteristics:

Candidates will be required to conduct original research in the field of theoretical cosmology, particularly on late universe evolution and the nature of dark energy. While they must be capable of independent work, their research must be coherent with the general research program of existing research groups at the IFT.

## **CLOSED**

### **Postdoctoral Scientist position**

The theoretical high energy group is opening a postdoctoral research position, co-financed by the MICINN and the Comunidad Autónoma de Madrid, through the HEPHACOS project, with the following characteristics:

Candidates will be required to conduct original research in the field of theoretical high-energy physics, particularly on forward jets and small-x physics at the Large Hadron Collider and their applications to new physics. While they must be capable of independent work, it must integrate within the general research program of existing research groups at the IFT.

**CLOSED**

### **Postdoctoral Scientist position**

The theoretical high energy group is opening a postdoctoral research position, co-financed by the MICINN and the Comunidad Autónoma de Madrid, through the HEPHACOS project, with the following characteristics:

Candidates will be required to conduct original research in the field of theoretical high-energy physics, particularly on mathematical aspects of model building, involving tools and techniques from string theory, such as geometrical methods for the study of compactifications. While they must be capable of independent work, it must integrate within the general research program of existing research groups at the IFT.

**CLOSED**