

Predocctoral positions at the Instituto de Física de Cantabria (Santander, Spain)

IFCA SEEKS FOR RECENT GRADUATES WITH INTEREST IN PURSUING A PHD IN SOME OF ITS RESEARCH LINES

Particle Physics, Astrophysics, Cosmology, Computing Science and Climate. 8th of May 2019

IFCA (<http://www.ifca.es>) is a multidisciplinary research center located in Santander (Spain) with focus on the study of the fundamental structure of the Universe, from the smallest objects to the largest structures. We also investigate nonlinear phenomena and collective behavior of physical systems. In addition to carrying out cutting edge basic research, we address societal global challenges such as the treatment of Big-Data, developments on Artificial Intelligence, Climate and Climate change, and participate in international initiatives to provide computational support to the Open Science paradigm. IFCA is one of the 48 centers in Spain awarded with the distinction of Excellence by the Spanish Ministry of Science, Innovation and Universities.

We request:

Excellent candidates of any nationality with interest in joining a research team in any of the areas outlined below.

Candidates must have obtained a postgraduate degree that could be assimilated to a Spanish Master in Physics, Mathematics, Computer Science or related fields by the time of the contract signature. Applicants without the degree at the time of the call but expecting to get it by the time of the signature will be conditionally considered.

Selected candidates are expected to register into the Universidad de Cantabria (Spain) official doctoral programme.

Candidates must have a strong commitment to scientific research and an excellent academic record.

Candidates must have good working knowledge of English or Spanish.

Candidates must not have been awarded a doctoral degree.

Preference will be given to candidates who have recently obtained their Master Degree, in any case no more than two years ago.

We offer:

Up to 7 predoctoral contracts to pursue research towards a Doctorate Degree with a project in one of the following prioritized research lines:

- AGN X-ray Astronomy: scientific definition of Athena, particularly in the field of extragalactic surveys and AGN science. Contact person: Francisco Carrera, carreraf@ifca.unican.es
- HL-LHC: Research and Development of new Silicon detectors for the High Luminosity phase of LHC. Contact person: Gervasio Gómez, gervasio@ifca.unican.es
- CMB polarization: Cosmological analyses of current CMB experiments (e.g. Planck and QUIJOTE) and preparation for scientific exploitation of future projects (e.g. LiteBIRD mission, European Low Frequency Survey). Contact person: Belen Barreiro, barreiro@ifca.unican.es
- EOSC: Implementing Advanced Computing Techniques in the European Open Science Cloud. Contact persons: David Rodriguez, drodrig@ifca.unican.es; Álvaro López, aloga@ifca.unican.es.
- IPCC and CORDEX: Data science and machine learning techniques for global and regional climate data. Contact person: José Manuel Gutiérrez, gutierjm@ifca.unican.es
- Dark Universe: Revealing the hidden nature/constituents of the Universe, exploiting synergies between the Astrophysics/Cosmology and Particle Physics groups. Contact persons: José M. Diego, jdiego@ifca.unican.es; Rocío Vilar, vilar@ifca.unican.es
- Data Science techniques applied to Big Data in Open Science. Contact persons: Lara Lloret, lloret@ifca.unican.es; Fernando Aguilar, aguilarf@ifca.unican.es

Conditions:

Four contracts will start in September-October 2019, while the remaining three will start in the first half of 2020.

The deadline for the first round of applications is 10th July 2019, and a second round will be announced later.

Typically, PhD contracts at IFCA receive a 4-year contract with an annual gross salary in the range 16.422€ - 21.279€, depending on qualifications. The contracts include standard cover from Spanish National Health System and additional funding for travelling and training.

Application:

To apply please send an email to mdmifca-info@ifca.unican.es (indicating the research priority of interest among those above listed), including a CV, a brief letter explaining your motivation and the research area you are interested in, copy of qualifications, and the names and emails of up to two professors who could refer on you.

For specific questions about each research line, please address to the corresponding contact person. More information can be found at: <http://ifca.unican.es/en-us/mdm/calls>