

Postdoctoral Fellow in Structure and Evolution of the Milky Way Galaxy through Gaia

The [Institute of Cosmos Sciences](#) of the [University of Barcelona](#) (ICCUB) is seeking a Postdoctoral Fellow in Structure and Evolution of the Milky Way Galaxy through Gaia for its Unit of Excellence Maria de Maeztu postdoctoral positions. Find out more positions in related areas [here](#).

The ICCUB is an interdisciplinary center with more than 60 long term scientists, 20 engineers and 80 postdoctoral researchers (55% international) and PhD students (30% international) offering an international and multicultural environment. The ICCUB also hosts a vibrant fundamental research program in cosmology, astrophysics and particle physics, with a strong technology unit supporting our participation in international collaborations in observational astronomy and experimental particle physics.

Job description

The vast improvement in astrometric accuracy for nearly 2 billion stars achieved by the Gaia mission is revolutionizing the studies of the Milky Way (MW) and their relation to cosmology. The ICCUB is uniquely positioned for science exploitation because of 1) our participation in the mission since its beginning, 2) our local expertise on galactic dynamics and 3) our leadership in building the Gaia Archive with its associated repository and Data Mining systems. The ICCUB Technological Unit is developing tools for data processing, distributed computing and big data to exploit more efficiently the Gaia Archive.

We are seeking candidates who can make a significant contribution to the understanding of the structure and history of the MW, improving upon the local and current description of the MW, and which help us understand galaxies in a cosmological framework, by using the upcoming third Gaia Data releases (end 2020 and first half of 2022) and related surveys (e.g. Gaia-ESO, WEAVE, 4MOST, OCCASO, MIRADAS and JPLUS/JPAS).

This includes research in topics like the stellar initial mass function and star formation history of the MW components; Galactic dynamics (spiral arms and bar dynamics, perturbation from external galaxies, streams etc); the MW chemical evolution traced by field stars and clusters coupled with Galactic dynamics; modelling of the substructures of star-forming regions revealed by Gaia; globular clusters and the initial mass function at high-redshift; characterization of the ultra-faint dwarf-galaxy population around the MW to test DM models. Synergies among topics and with the other priority lines in the ICCUB will be evaluated positively.

The priority lines of the Maria de Maeztu proposal can be found [here](#).
To know more about the research interests of the ICCUB, please follow this [link](#).

Employment conditions:

Position is for two years renewable for a third year depending on performance and funding.

Gross annual salary will be in the range of 32 to 36 k€, with included [social security and public healthcare benefits](#), covering spouse and children.

Position is expected to begin no later than the fall of 2021, although exceptions can be made in cases of maternity/paternity or other special circumstances.

Equal Employment Opportunity Statement

ICCUB offers and promotes a diverse and inclusive environment and welcomes applicants regardless of age, disability, gender, nationality, race, religion or sexual orientation (for additional information please see the [Diversity, Equity and Inclusion Commission](#)). Job seekers in need of a reasonable accommodation to complete the application process should call or email secretaria@icc.ub.edu with their request.

Application procedure:

Documents that will be required for your application are:

- Curriculum Vitae
- Research Description and Plan (maximum 6 pages)
- Three letters of recommendation
- URL to publications in a public database

All applications must be submitted online through this [link](#).
Inquiries about the application submission can be directed to Esther Pallares (secretaria@icc.ub.edu).

For inquiries about the scientific aspects, please contact Carme Jordi (carme@icc.ub.edu)

Deadline:

Applications should be uploaded in [here](#) before December 8th to receive full consideration, but those uploaded later will also be considered until positions are filled.

Funding:

The position is financed by the State Agency for Research of the Spanish Ministry of Science and Innovation through the "Unit of Excellence María de Maeztu 2020-2023" award to the Institute of Cosmos Sciences (CEX2019-000918-M).

The [Unit of Excellence Maria de Maeztu](#) recognition has been awarded by the Spanish Government in 2020 for the second time to the ICCUB, as a center with a highly competitive strategic research programmes in the frontiers of knowledge.