Research Scientist in Artificial Intelligence applied to cryo electron tomography (Predoc level)

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The Instituto Biofisika (CSIC-UPV/EHU) (https://biofisika.org), located at the Leioa Campus of the University of the Basque Country will open a call for research scientist position at predoctoral level. Successful candidate will join the Laboratory for Numerical Methods of Cryo Electron Tomography (cryoET), led by Dr. Daniel Castaño Díez. The group is dedicated to advancing computational methodologies for the automated analysis and interpretation of 3D cellular imagery, primarily through its in-house software platform *Dynamo* (https://dynamo-em.org).

We offer a PhD contract, linked to the project PID2024-158469NB-I00 "Graph Learning for Classification and Segmentation in Cryo-Electron Tomography", funded by the Spanish Ministry of Science, Innovation and Universities. This project aims at extending Dynamo through the integration of novel deep learning techniques for the identification and characterization of small, flexible proteins within their natural surroundings. The successful applicant will contribute to the development of these new methodologies, as well as to the ongoing development and maintenance of the software. Additionally, they will be involved in the analysis of cryoET datasets provided by external collaborators.
This is a full-time, 4-year position supported by The Spanish Ministry of Science, Innovation and Universities. The contract will be part of the project PID2024-158469NB-I00 funded by MICIU/AEI/10.13039/501100011033/ FEDER, UE and by the FSE+.

Ideal candidates for this position must hold an official degree in Mathematics, Computer Science, Engineering or similar, and has a strong background in Matlab. An interest in carrying research in Life Sciences is assumed. Necessary qualifications are:

- Experience in Deep Learning and/or other methods from Artificial Intelligence.
- Solid background in numerical mathematics, including optimization and heuristic optimization methods.
- Proficiency in software prototyping and production. Good command of MATLAB, Python, C++ and/or CUDA is expected.

Further desirable qualifications of the successful candidate include:

- Experience in Image Processing for Electron Microscopy.
- Experience in Image Processing for Light Microscopy.
- Experience in Molecular Dynamics Simulations.

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Incorporation is expected in February/March 2026. The salary is established by the Spanish Research Council (CSIC) fixed at around €24,000 gross per year for an BSc/MSc holder. Expressions of interest in a single pdf should be directed to daniel.castano@csic.es including:

- Curriculum Vitae **with academic record**.
- A motivation letter.
- Two reference letters or contact email of referees.

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