Postdoc in Image analysis/Data modelling for single molecule localization microscopy (Barcelona)

We open a 2-year postdoc position funded with a HFSP project. The project will derive structural measurements of macromolecular complexes from Single Molecule Localization Microscopy (SMLM) and live-cell imaging.

In the past, our lab combined cell engineering and advanced live-cell imaging to develop PICT, a new method that can resolve molecular architectures *in vivo* with up to 2 nm precision (Picco *et al*, 2017, Cell; Irastorza-Azcarate *et al*, 2019, Structure). In collaboration with the groups of Daniel Castaño-Díez (Univ. Basel, Switzerland) and Alex de Marco (Monash Univ., Australia), we received a HFSP grant to continue pushing the limits of microscopy to investigate molecular structures in situ. **The researcher is expected to lead the development of imaging and computational tools that allow us to extract quantitative models from super resolution data and to deliver mechanistic insight about the 3D organization of the cell machinery.** The tasks of the candidate will include the implementation of new imaging methods and image analysis to measure physical constraints based on SMLM and data modelling, machine learning etc.

The Lab (www.gallegolab.org)

The researcher will join an international team developing imaging techniques in the frontier between cell biology and structural biology. The lab is truly interdisciplinary, with all the necessary facilities and expertise for the cell biology, live-cell imaging, single molecule localization microscopy and computational modelling. As part of the Pompeu Fabra University, the lab is located at the PRBB, one of the strongest scientific campus in south Europe. With state-of-the-art research facilities, PRBB offers an ideal scientific and international environment.

If you are interested, please send a short cover letter, your CV and the contact for 3 referees to oriol.gallego@upf.edu

Deadline: November 30th, 2020

The position:

- Starting date around January 2021-April 2021
- Salary according to the researcher expertise
- 2-year position

Requirements

- Strong expertise in at least one of the following: Optical physics applied to light microscopy, bioimage analysis or data modelling.
- MSc or PhD degree in computer sciences, (Bio-)physics, (Bioscience) engineering, or related disciplines.
- Expertise in SMLM will be valued, although it is not a requirement.

References:

- Picco, A., Irastorza-Azcarate, I., …, Gallego, O., (2017) ***Cell*** 168, 400-412.e18.
- Irastorza-Azcarate, I., …, Gallego, O., (2019) ***Structure***. 27, 886-892.