

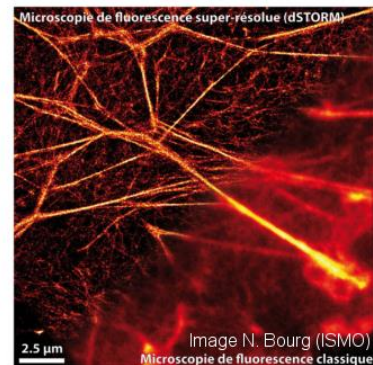
2 years postdoctoral position in Biophotonics Institut des Sciences Moléculaires d'Orsay Université Paris Sud

Isotropic Super-Resolution microscopy

The Biophotonics group (ISMO, Orsay) develops new membrane imaging modalities in close collaboration with the University Paris Sud Biophotonics Center and Institut Langevin (ESPCI, Paris). In particular we have patented the implementation of wide field supercritical angle fluorescence (SAF) microscopy, which offers a smart way to reach nanometric axial resolution. SAF microscopy rely on the property of a fluorophore to emit fluorescence with an angle above the critical angle when place close to sample-coverslip interface. As this SAF emission sharply decrease when the distance from the interface increase, a precise localization can be retrieved.

The SAF emission is detected by inserting only in the detection path way of the microscope a dedicated amplitude or phase mask, any microscope can thus be coupled with a SAF detection module.

In particular, we are currently coupling SAF microscopy with super-resolution techniques such as STED and dSTORM. These two super-resolution/superlocalization setups are currently running and offers the standard improved lateral resolution. By combining with SAF emission module, isotropic spatial resolution could be reached.



The candidate will be in charge of coupling SAF microscopy with super-resolution microscopy to reach isotropic resolution. In particular, dynamic way to discriminate SAF emission will be investigate. He/she should be trained in optics, fluorescence and some knowledge in cell biology. A working experience either in super-resolution microscopy or in adaptive optics would be appreciated.

The candidate should be highly organized, perform several tasks in parallel and interact with an interdisciplinary team. Interested applicants are encouraged to submit their CV along with a list of publications and reference contacts.

Starting date : Available immediately

Location : Orsay, Université Paris Sud

Contact : Sandrine Lévêque-Fort sandrine.leveque-fort@u-psud.fr

Website : <http://www.ismo.u-psud.fr/spip.php?rubrique109>