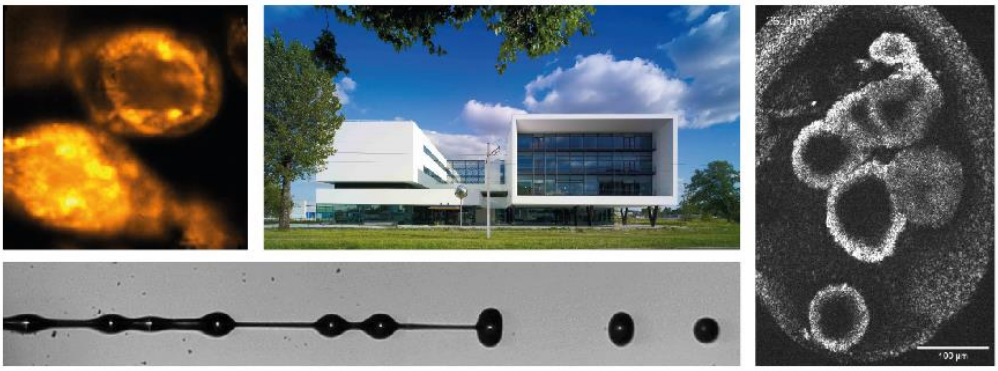
Postdoc offer: 3D optical imaging of encapsulated cells

BioImaging & OptoFluidics Lab

(http://biof-lab.org)

Laboratoire Photonique Numérique et Nanosciences (LP2N), Bordeaux.



Context - The BiOf team from the Laboratoire Photonique Numérique et Nanosciences (LP2N, Bordeaux) recently developed a micro-fluidic technique for cell encapsulation that provides a controlled, high-throughput production of multi-cellular systems. These assemblies, for instance sub-millimeter organoids that will recapitulate some specific organ functions, have numerous applications in fields such as tissue engineering, oncology and regenerative medicine.

Objective - The objective of this project is to implement and adapt volumetric imaging methods such as **Optical Coherence Tomography** (OCT) and **Light Field Microscopy** to observe the assembly and evolution of these complex structures over time. In addition to the optical experimental aspect, this work will focus on developing new numerical image processing approaches to correct aberrations induced by the complex structure of the sample and thus to extend the imaging depth.

Environment - This project will take place in the BiOf team at LP2N (Institut d'Optique d'Aquitaine). Our interdisciplinary team (~15 people) works at the interface between optics, biology, microfluidics and biophysics.

Candidate – This project involves **instrumental development** in optics, **data acquisition and analysis** (Python / Matlab). We are looking for a motivated candidate with a strong background in optics/physics, eager to work on a subject with a strong optical component in an interdisciplinary environment.

To apply, please send a CV, and at least a reference letter to Amaury Badon (amaury.badon@institutoptique.fr) .