

Spécialité de Master « Optique, Matière, Paris »

Stage de recherche (4 mois minimum, à partir de début mars)

Proposition de stage (ne pas dépasser 1 page)

Date de la proposition : 21 novembre 2017

Responsable du stage / internship supervisor:

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Nom du Laboratoire / laboratory name: Laboratoire Photonique Numérique et Nanosciences

Code d'identification : UMR 5298 Organisme : Institut d'Optique Graduate School

Site Internet / web site: <https://sites.google.com/site/bordeauxnanophotonicsgroup/home>

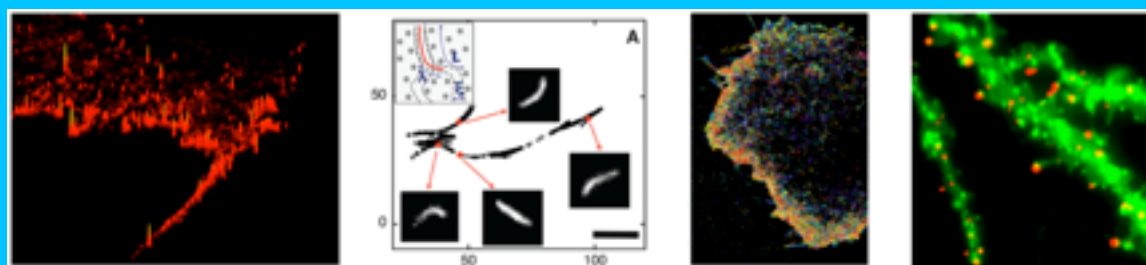
Adresse / address: 1 rue François Mitterrand, 33400 Talence

Lieu du stage / internship place: LP2N

Titre du stage / internship title: **Tracking of single carbon nanotubes in live brains and super-resolution microscopy**

Keywords: Super-resolution microscopy, single molecule detection, neurosciences, biophysics

The Bordeaux Nanophotonics group at LP2N-Institut d'Optique develops ultra-sensitive optical microscopy approaches, with emphasis on the detection of single nano-objects, and applies these approaches to study relevant biological questions (*e.g. Science 07, Science 08, Science 10, Sci. Rep 13, Nat. Cell Biol 12, Sci. Rep. 15, Nat. Comm 16, Nat. Nanotechnol 17...*).



Positions (internship / possibly PhD...) are available in our group on an *interdisciplinary project* aiming at studying brain organization at different scales (nano to micro) in physio-pathological states. This project also gathers on-campus specialists in probe chemistry, neurophysiology and brain pathologies (Alzheimer and Parkinson diseases).

The subjects will consist in developing high-resolution/super-resolution optical microscopy techniques and biophysical models based on the **detection of single carbon nanotubes in live brains**. A strong interest for interdisciplinary work is essential since his/her work will be performed in constant synergy with our on-campus collaborators.

Ce stage pourra-t-il se prolonger en thèse ? Possibility of a PhD ? : oui

Si oui, financement de thèse envisagé/ financial support for the PhD: Demande en cours

Lumière, Matière, Interactions	oui	Lasers, Optique, Matière	oui
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Fiche à transmettre (fichier pdf **obligatoirement**) sur le site <http://stages.master-omp.fr>