



Laboratoire LEPRINCE-RINGUET
Ecole polytechnique IN2P3/CNRS

Séminaire

Imaging the phase of the light for 3D molecular resolution

The use of photons to characterize samples and particles is a versatile approach since the invasiveness remains limited while the resolution can be high. In particular, in the scope of biological sample imaging, recent advances in microscopy (2014's chemistry Nobel prize for super-resolution) have unlocked the capability to beat the so-called diffraction limit and thus reach molecular resolutions that were normally possible only with electron microscopy. However, it remains challenging to apply super-resolution in thick biological samples while having a 3D molecular resolution.

In this talk, I will present our recent work in optical imaging [1,2] which gives us now the capability to measure the phase of the light in any light beam. Applied in the scope of biological sample super-resolution imaging, this development solves the problem of 3D super-resolution even at depth in biological samples.

1 : Bon et al., Optics Express, 2009

2 : Bon et al., Nat. Methods, 2018

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Salle conférence du
LLR

Lundi 18 Mars
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Responsables séminaires

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