



## SEMINAIRE ISMO

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### **Structural imaging in cells and tissues by polarized fluorescence and nonlinear microscopy**

Multimodal optical imaging is reaching today a mature stage, using the combination of fluorescence and nonlinear coherent optical contrasts to reveal morphological features in cells and biological tissues from fixed samples to in vivo studies. While imaging can guide interpretation through morphological observation at the optical diffraction scale, providing finer structural information on biomolecular assemblies requires challenging instrumentation developments.

Reporting molecular organization in protein filaments, aggregates or lipid membranes down to the nano scale is made possible using polarization resolved optical microscopy, taking advantage of the orientation-sensitive coupling between optical excitation fields and transition dipole moments. I will describe how this approach can be implemented and exploited to monitor molecular angular behavior and access sub-diffraction scale structural information. I will show that when brought down to the single molecule scale, this method brings additional insight into orientational flexibility at the nanometric scale, in particular on actin labels.

**Le séminaire  
sera donné  
en Anglais**

**Mardi 14 mars 2017 à 11h**

**Bât. 351 – 2<sup>ème</sup> étage (Bibliothèque)**

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