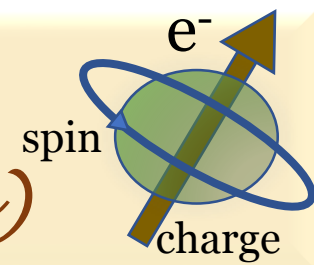




# W2S Seminar

(Webinar series on Spintronics)



## Magnetic skyrmions in magnetic multilayers

Speaker:  
Prof. Stanislas Rohart  
Laboratoire de Physique des Solides  
Université Paris-Saclay, CNRS  
Orsay, France

Date and time:  
**25.06.2020 at 11am**  
Via  
**Google meet**

### Abstract

The advent of spin-orbit coupling in spintronics has deeply modified the paradigm for this field of research. Chiral effects at magnetic/high spin orbit material modifies the magnetic exchange itself, adding to the Heisenberg exchange a non collinear counterpart, called Dzyaloshinskii Moriya interaction (DMI) and open new perspectives for magnetic textures. Magnetic skyrmions, small chiral magnetic bubbles with a topology different from the ferromagnetic ground state, are emblematic to this field as their existence is directly connected to the DMI.

In this talk, I will introduce the physics of magnetic skyrmions in magnetic multilayers and their perspective of applications in spintronic devices, discussing the condition to stabilize them and move them efficiently. A particular focus will be given to the topology related effect such as gyrotropic deflexion (an equivalent of the Magnus effect in hydrodynamics), topology induced suppression of thermal diffusion and perspective to modulate its effects in antiferromagnetic materials.

If interested to attend then please visit <https://www.niser.ac.in/w2s-seminar/index.php>