



Seminar Dr Yuta Yamane

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Thursday December 1st 2022 at 14h00
Salle Patrick Alnot (4-A014)

Current-driven dynamics of noncollinear antiferromagnetic textures

Since the prediction of staggered magnetic order and its experimental observations through 1930- 50s, antiferromagnets (AFMs) have occupied a central place in the study of fundamental magnetism. The absence of macroscopic magnetization in AFMs, however, makes it difficult to effectively manipulate them by use of external magnetic field, a main reason of the limited uses of AFMs in technological applications. In this talk, I will discuss the dynamics of noncollinear- type AFMs driven by spin current injection. Our theoretical model is applicable to technologically important materials such as Mn_3Ir and Mn_3Sn , enabling an analytical approach to, e.g., domain wall dynamics in those materials. I will also introduce our recent experimental work where we observed continuous rotational motion of the noncollinear spin structure in Mn_3Sn induced by dc spin injection.

Séminaire organisé dans le cadre du projet MUSE3

