

R. Duine

Title: Theory of interaction between spin current and magnetization dynamics in ferromagnets

Abstract:

In these lectures I will theoretically describe the physics of the interactions between spin-polarized current and magnetization dynamics in metallic ferromagnets. I will focus on continuous magnetic textures, such as domain walls and skyrmions, and discuss how the dynamics of such magnetic configuration is affected by spin current via spin transfer torques. I will moreover describe charge current that arises due to magnetization dynamics. In the last lecture I will discuss some new developments concerning antiferromagnets and magnetic insulators.