

Seminar: Hard Condensed Matter Theory

Room: Galilei Room (Staudinger Weg 9, 01-128)

Time: Tuesday, 21. Juni 2015, 14:15

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Magnetization dynamics in chiral spin textures: Spin wave channelling and skyrmion oscillations

Chiral symmetry can be broken in magnetic thin films and multilayers, leading to the appearance of an anisotropic exchange interaction of the Dzyaloshinskii-Moriya (DM) form. We have studied theoretically how the DM interaction can strongly modify measurable features of spin wave excitations in ultrathin films with perpendicular magnetic anisotropy. We will show how nonreciprocal channelling can appear in systems with domain walls, which has consequences for spin wave modes in confined geometries, such as strips and dots. We will also describe the breathing dynamics and current-driven oscillations of isolated skyrmions in ultrathin film dots.

All interested are cordially welcome!