On-line SPICE-SPIN+X Seminars

Wednesday, 11th May 2022, 15:00 (CET)

The seminar will be via Zoom (Meeting ID: 835 6826 1125) and live streamed in the SPICE YouTube Channel.

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Magnetic Chirality

The term of “chiral” has been extensively, in fact, almost abusively, used in Physics community in recent years. Chirality refers the situation where an object and its mirror image cannot overlap to each other by spatial rotation. In addition, chirality should not change under time reversal. Magnetic chirality means chirality in spin ordered states or spin textures. Chirality prime (chirality′) means that all of mirror and time reversal symmetries are broken even if spatial rotation is freely allowed. We can have magnetic chirality or chirality′ in three different situations: [1] in centrosymmetric magnetic lattices while their crystallographic lattices are chiral, [2] in chiral magnetic lattices while their crystallographic lattices are also chiral, and [3] in centrosymmetric crystallographic lattices. We will discuss a number of examples of magnetic chirality and chirality′, and also their emergent physical phenomena.