TECHNISCHE UNIVERSITÄT WIEN

INSTITUT FÜR FESTKÖRPERPHYSIK
Institute of Solid State Physics

Wiedner Hauptstr. 8-10/138, 1040 Wien
www.ifp.tuwien.ac.at

EINLADUNG zum IFP-SEMINAR

Topological aspects of switching in magnetic and multiferroic materials

Sergey Artyukhin

Istituto Italiano di Tecnologia, Genova - Italy

Host: Andrei Pimenov

Termin: Mittwoch, 26. Juli 2023, 16 Uhr

Ort: Seminarraum DC rot 07 - 7. OG, roter Bereich, Freihaus

Abstract:

Topology has played a prominent role in condensed matter physics in the recent years. In magnetism, topological properties of domain walls and vortices were known for long, and more recently topological magnon band structures and other aspects were discussed. However, switching, the most important process from the viewpoint of applications, has not been investigated in the context of topology. I will discuss magnetoelectric switching in $GdMn_2O_5$, the first known topologically protected switching phenomenon, and electric field induced switching in spiral magnets, where topology turns out to play an important role.