

Donnerstag | 16. Januar 2020 | 16:15 Uhr | HS I

Prof. Dr. Dr. h.c. Prof. h.c.
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spricht zum Thema

**From Skyrmions to Majoranas: Nanoscience Inspired
by Particle Physics Theory**

Abstract:

Modern solid state physics has become greatly inspired by particle physics theories in recent years. The reason is that quasiparticles are a very useful concept for understanding complex phenomena in many-body physics. Recent outstanding examples are Skyrmions as topological defects in vector fields characterized by a topological charge, or the Majoranas, i.e. particles being their own antiparticles. The lecture will focus in the first part on the discovery of single chiral magnetic skyrmions in ultrathin metallic films, made at the University of Hamburg in 2013, and their potential applications in future ultrahigh-density magnetic memory and logic devices. In the second part, the lecture will focus on the exciting search for Majoranas in atomic-scale model systems with great potential for future quantum information and communication technologies.

Interessenten sind herzlich eingeladen.

Einladender: Prof. Dr. Klinkke

