JOHANNES GUTENBERG UNIVERSITÄT MAINZ

Seminar: Hard Condensed Matter Theory

Room: Galileo room, 01-128 (Staudinger Weg 9)
Time: Tuesday, 24.10.2017, 14:00

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Effective description of topological magnetic textures

In this talk, I will speak about magnetic textures including domain walls and skyrmions in one and two dimensions from a macroscopic point of view. Among all the possible configurations, there is a set of magnetic textures with topological properties and a rather rigid structure. We analyze the minimum requirements for the existence and creation of these textures. We will present an effective Hamiltonian formalism that describes the low energy excitation of the topological textures. This formalism is independent of microscopic details and external perturbations. We show how interactions may be easily introduced and consider also antiferromagnetic materials. Future developments and potential applications will be discussed.

All interested are cordially welcome!

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