Karlsruher Institut für Technologie

KIT-Fakultät für Physik

Einladung zum Physikalischen Kolloquium

09.05.2025 **Jan Masell, Karlsruher Institut für Technologie & RIKEN CEMS, Japan**

»3d magnetic textures«

Einführung: M. Garst

Magnetic textures, i.e., the smoothly varying magnetization in a solid, have been the subject of fundamental and applied physics research for a century. However, only with recent advances in tomographic magnetic imaging techniques, textures that spiral in all three spatial dimensions could be observed on the nanometer scale. Moreover, the zoo of topologically distinct textures and complicated energy landscapes in 3d offer numerous challenges for the description and prediction of phenomena in 3d magnetic materials. I will highlight recent advances in 3d magnetic imaging, in our understanding of 3d magnetic textures and in our combined theoretical & experimental efforts in finding non-trivial 3d magnetic textures in real materials.

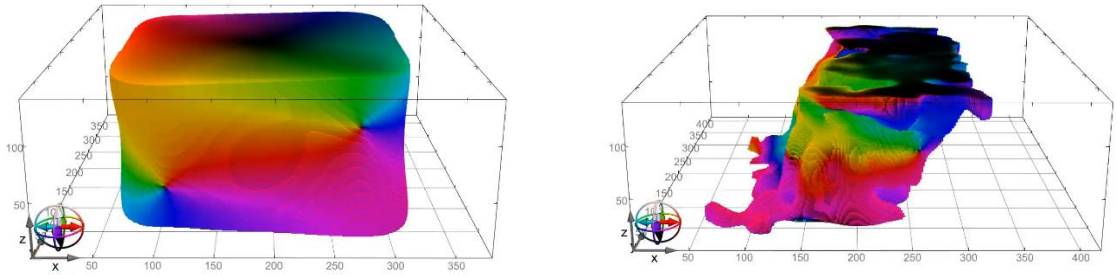

Figure: Theoretical prediction of a 3d antiskyrmion with topological defects (Bloch points) in a 140nm thick specimen of Schreibersite (left). Experimental observation via holographic vector field electron tomography (right). Color indicates the magnetization where $m_z<0$. [F. S. Yasin, J. Masell, et al., Adv. Mater. 36 (16), 2311737 (2024)]

Der Vortrag findet **am Freitag, den 09. Mai 2025 um 15:45 Uhr im Otto-Lehmann-Hörsaal**, Physik-Flachbau (Geb. 30.22), KIT-Campus Süd statt.

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