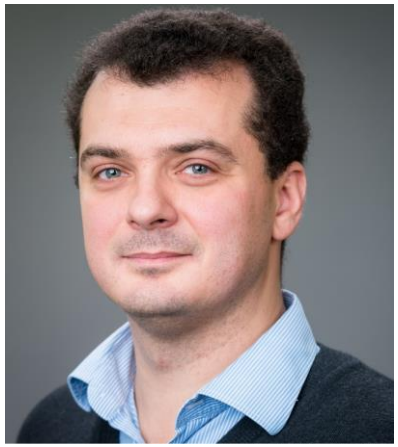
W2S Seminar
(Webinar series on Spintronics)



Curvilinear magnetism

Speaker:
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Date and time:
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3pm
Via
Zoom

Abstract

Conventional magnetic field sensors are fabricated on flat substrates and are rigid. Extending 2D structures into 3D space relying on the flexible electronics approaches allows to enrich conventional or to launch novel functionalities of spintronic-based devices. The lack of an inversion symmetry and the emergence of a curvature induced effective anisotropy and Dzyaloshinskii-Moriya interaction (DMI) are characteristic of curved surfaces, leading to curvature-driven magnetochiral responses and topologically induced magnetization patterning. The possibility to tailor magnetic responses by geometry of the object is a new approach to material science, which allows to obtain a desired functionality of spintronic and spin-orbitronic devices yet without the need to rely on the optimization of the intrinsic material properties. Here, we will review fundamentals of 3D curved magnetic thin films and focus on their applications in eMobility, virtual and augmented reality, soft robotics, and human-machine interfaces.

If interested to attend then please visit https://www.niser.ac.in/w2s-seminar/index.php