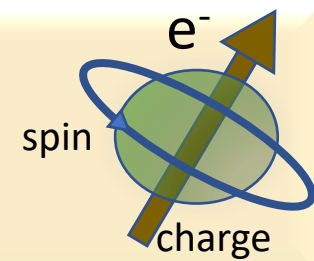




W2S Seminar

(Webinar series on Spintronics)



Creating and Manipulating Magnetic Skyrmions

Speaker:

Prof. Anjan Soumyanarayanan
National University of **Singapore** (NUS)
Agency for Science, Technology & Research (A*STAR)

Date and time:

**13.05.2021 at
3.00 pm IST**

**Via
Zoom**

Abstract

Magnetic skyrmions are nanoscale topological spin structures, touted as promising candidates for next-generation memory and computing devices. Practical technologies require skyrmions stable at zero external field, together with the ability to electrically write, move, and detect them within devices.

We begin by establishing a multilayer platform where skyrmion properties can be smoothly tuned via stack composition. Here we show that interfacial chiral interactions gradually induce transitions in key skyrmion characteristics, and present a distinct macroscopic marker associated with zero field skyrmion stability. We then turn to efforts to electrically write, delete, and move skyrmions in nanowire devices. To conclude, we examine synthetic antiferromagnetic films – which present a facile means to stabilize compact ZF skyrmions with promising dynamic characteristics.

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