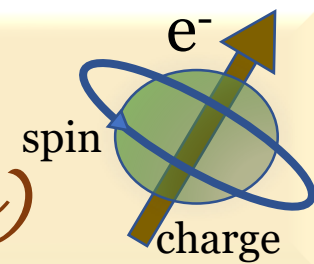




W2S Seminar

(Webinar series on Spintronics)



Giant spin-orbit torque from strong correlations

Speaker:

Dr. Shouvik Chatterjee

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Materials Science

Tata Institute of Fundamental Research, Mumbai

Date and time:

08.04.2021 at

03.00 pm

Via

Zoom

Abstract

The use of current-generated spin-orbit torques to drive magnetization dynamics is under investigation to enable a new generation of non-volatile, low-power magnetic memory. Previous research has focused on spin-orbit torques generated by heavy metals, interfaces with strong Rashba interactions, and topological insulators, which can all be well-described using models with noninteracting-electron bandstructures. Here, I shall show how renormalization of electron bands associated with the many-body Kondo resonance can lead to a large enhancement of spin-orbit torque in a strongly correlated heavy fermion system. Our observation suggests new opportunities in spin-orbit torque manipulation by utilizing quantum many-body states.

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