ICTS Seminar

Title : Giant spin-orbit torque from strong correlations

Speaker : Shouvik Chatterjee (TIFR, Mumbai)

Date : Wednesday, 12th January 2022

Time : 03:00 pm (IST)

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.

Venue : Please click on the below link to join the seminar

https://us06web.zoom.us/j/85022068496?pwd=eG9ZT1N2Sm16S2NqK3RNLzNhRFhvdz09
Meeting ID: 850 2206 8496
Passcode: 121315