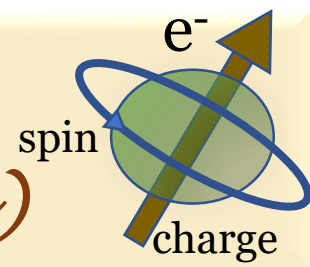




W2S Seminar

(Webinar series on Spintronics)



$ML^{-9}T^{-15}$: Length and Time correlation in Spintronics



Speaker:
Dr. Jyoti Ranjan Mohanty
Department of Physics
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Date and time:
02.07.2020 at 11am

Via
Google meet

Abstract

Spintronics devices relies on storing or manipulating information in smaller length scales (nm's) at faster time scales (femto- seconds). In order to increase the data storage density many class of magnetic materials have been explored. Thin films of rare-earth and transition metal combination have shown tremendous potential for high density data storage due to their intrinsic and extrinsic tuneable properties. I will present the evolution of self-assemble magnetic systems as a function intrinsic and extrinsic parameters in formation and stability of the domains and their dynamics. The application of an ultra-short laser pulse on a ferromagnetic film allows changing its magnetization in the femto-second time scale. This scientifically fascinating effect has also technological implications, e.g., regarding the ultimate speed at which information can be stored and processed in magnetic media. Even today, the microscopic understanding of laser induced ultrafast demagnetization remains a challenging issue. I will give an overview on this topic with experiments complimented by micromagnetic modeling.

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