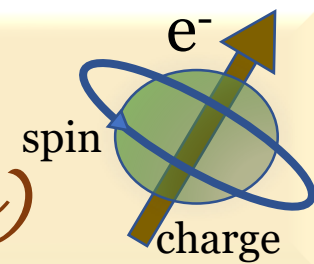




W2S Seminar

(Webinar series on Spintronics)



Optical control of magnetism and ultrafast spintronics

Speaker:

Prof. Eric Fullerton

Center for Memory and Recording Research
University of California San Diego

Date and time:

04.03.2021 at

11.00 am

Via

Zoom

Abstract

The manipulation of magnetization without applied magnetic fields have attracted growing attention over the last two decades. The low-power manipulation of magnetization, preferably at ultra-short time scales, has become a fundamental challenge with implications for future magnetic information storage and memory technologies. I will discuss recent experiments on the optical manipulation of magnetism using 50-5000 fs optical pulses [1,2]. This includes optical control of ferromagnetic films and granular recording media that potentially enable breakthroughs for numerous applications. In addition to optical control of magnetism, a pathway to ultrafast spintronics has emerged from the study of optical control of magnetism. I will highlight recent studies of THz emission and magnetization control related to optically induced ultrafast spin currents [3,4]. [1]. Nat. Mater. 13, 286, (2014). [2] Science 345, 1337-1340 (2014). [3] Adv. Mater. 30, 1804004 (2018). [4] Phys. Rev. Mater. 3, 084415 (2019).

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