Departmental Seminar

Speaker: Prof. Mukunda P. Das

Affiliation:

Department of Theoretical Physics, Research School of Physics and Engineering, The Australian National University, Canberra, Australia

Title of the Talk:

Physics of Vortex Matter of Novel Superconductors

Abstract:

Vortices occur in various fields of classical and quantum physics; namely fluids and plasmas in continuous matter, quantised vortices in superconductors, superfluids and ultra-cold atoms and topological vortices in magnets and cosmic strings. In this talk I shall focus on recent works towards our understanding of superconducting vortices. After giving a brief introduction I shall bring to attention the superconducting vortices, their mutual interactions and the phase diagrams of conventional and novel superconductors. More recently novel superconductors (for example, MgB2, iron□] pnictides etc.) have been shown to exhibit a host of new properties involving multiple electronic condensates and are topics of fundamental interests. I shall highlight the physics of vortex matter in this new endeavour.

Date & Time: 20.01.2014 at 3.00 P.M.

Venue: Fermion

Organised by: CMPMS Dept.

All are cordially invited to attend the Talk.