

**Jahanfar Abouie (IASBS, Iran):**

**Title:** "Anisotropic conductivity in magnetic topological insulators"

**Abstract:** Investigation of the magnetic, thermodynamic and transport properties of topological insulators are the new emerging field in the condensed matter physics. Doping the topological insulators with magnetic impurities changes the transport properties of these systems. The spin-momentum locking of the surface electrons makes their scattering from magnetic impurities anisotropic and the standard relaxation time approximation (RTA) is not applicable. Many attempts have been devoted to development of the generalized RTA for anisotropic systems. However, it is still felt the lack of a closed form for the generalized RTA for anisotropic systems. In this talk, after giving a brief review on the transport properties of magnetic topological insulators, I will present our recent results on the charge conductivity of the magnetic topological insulators. I will show that the charge conductivity is anisotropic and strongly depends both on the direction of the spins of magnetic impurities and on the magnitude of the bulk magnetization.

Ref: arXiv: 1409.8066