

# **Students' Annual Seminar**

## **Using Scanning Tunneling Spectroscopy for studying Metal Adatoms on Graphene**

### **Saurabh Chaudhary**

Scanning Tunneling Microscopy and Spectroscopy is a useful experimental tool for performing spatial and energy resolved surface studies of materials. In this talk, I shall focus on our STM characterization of graphene film grown on Copper and subsequent deposition of ferromagnetic Cobalt atoms on the above surface. The 2-D honeycomb structure of graphene provides a natural template for a site specific adsorption of the Cobalt atoms. In addition to the measurement of the surface electronic density of states, we use Inelastic Tunneling Spectroscopy to characterize the different phonon and magnon modes of these surfaces at both room temperature and 13.5K. I shall discuss details of our observation and analysis based on the above measurement techniques.

***Friday, Feb 9<sup>th</sup> 2018***

***04:00 PM (Tea/Coffee at 03:30 PM)***

***Seminar Hall, TIFR-H***