

**Tuesday, November 10, 11:30 am**

**Speaker:** Sherry Suyu

**Institution:** Max Planck Institute for Astrophysics, Munich

**Title:** Cosmology with Gravitational Lens Time Delays

**Abstract:** Strong gravitational lenses with measured time delays between the multiple images can be used to determine the Hubble constant ( $H_0$ ) that sets the expansion rate of the Universe. An independent determination of  $H_0$  is important to ascertain the possible need of new physics beyond the standard cosmological model, given the tension in current  $H_0$  measurements. I will describe techniques for measuring  $H_0$  from lensing with a realistic account of systematic uncertainties, and present the latest results from a program aimed to measure  $H_0$  from lensing. Search is underway to find new lenses in imaging surveys. An exciting discovery of the first strongly lensed supernova offered a rare opportunity to perform a true blind test of our modeling techniques. I will show the bright prospects of gravitational lens time delays as an independent and competitive cosmological probe.