



# Physical Research Laboratory, Ahmedabad

## Colloquium 17-01

- Speaker:** Dr. Veeresh Singh  
Astronomy & Astrophysics Division, PRL, Ahmedabad.
- Title:** “Different facets of Active Galactic Nuclei and their evolution”
- Time:** Wednesday, 11 January 2017, 16.00 hrs.
- Venue:** K. R. Ramanathan Auditorium, PRL

### Abstract

Observations over the last couple of decades have shown that almost all galaxies host SuperMassive Black Holes (SMBHs) of the order of million to few billion solar mass in their centers. The manifestation of accreting SMBHs in the centres of galaxies is termed as 'Active Galactic Nuclei' (AGN) which can play a crucial role in galaxy evolution via feedback processes. Hitherto, AGN population studies have mainly been limited to the local Universe, but more sensitive observations in recent years allow us to unveil new population of AGN at distant Universe. Our deep radio continuum surveys combined with auxiliary optical, IR surveys have discovered a new population of AGN called 'Infrared-Faint Radio Sources' (IFRSs). These AGN are at the redshift of  $(z) \sim 2 - 4$  and exhibit diverse properties in terms of their radio luminosities, sizes and spectra, indicating them to be radio-loud AGN at different evolutionary phases. The discovery of IFRSs has important implication on the models of galaxy evolution and missing unresolved component of Cosmic X-ray Background. This talk will also discuss about the role of deeper surveys from upcoming telescopes operating at radio, optical, IR and X-ray wavelengths.

### The Speaker

Dr. Veeresh Singh completed his MSc (2004) from CSJM University, Kanpur, India and obtained Ph. D. (2011) in Physics from Indian Institute of Astrophysics, Bangalore, India. He then worked as a postdoctoral fellow at the NCRA-TIFR, Pune, India, Institut d'Astrophysique Spatiale, Paris, France, and Astrophysics and Cosmology Research Unit - UKZN, Durban, South Africa. His areas of research interest are Multiwavelength study of Active Galactic Nuclei (AGN), Formation and evolution of AGN and their host galaxies, Population of AGN at high-redshifts and their environments and Deep radio and ancillary surveys of extragalactic fields. He has several national and international publications to his credit.

Tea at 15:30 hrs.

ALL ARE WELCOME

