

# Colloquium

By

Prof. Pankaj Joshi , TIFR

On

## Can I see a Black Hole?

--Life and Death of Massive Collapsing Stars--

**Abstract :** The black hole and space-time singularities are amongst the most important predictions of the General Theory of Relativity. The year 2015 marks the 100 years of Einstein theory of gravity, which is one of the most important corner stones of modern physics and cosmology. We shall review here these predictions of the Einstein theory, and in particular the current efforts to obtain a direct confirmation of black holes. Specifically, general relativity predicts three kinds of space-time singularities: the Big Bang, those hidden within a black hole, and the ones which are visible or naked singularities. The latter two types arise from gravitational collapse of massive stars, and when visible they offer an opportunity to test the Quantum Theories of Gravity or the Unification of Physics, as we shall point out.

**About Speaker :** Pankaj S. Joshi is a Senior Professor with the Tata Institute of Fundamental Research, Mumbai. His research is in the fields of gravitation and cosmology and he has published more than 150 research papers as well as books and monographs on the subject. He has held visiting faculty positions in several countries doing research and lecturing on these topics and has won several awards as well as Fellowships to scientific academies. He has also contributed a large number of books and articles towards science outreach and has given many public lectures.

**Day and Date** : Tuesday, August 11, 2015

**Time** : 4.00 pm

**Venue** : PF-AG 14, Seminar Room, Prefab

All are Welcome