

## **ICTS Colloquium**

Title : The fascinating story of gravitational wave detection: Physics Nobel 2017 and Beyond

Speaker : Bala Iyer, ICTS-TIFR, Bangalore

Date : Monday, October 30, 2017

Time : 3:00 PM

Venue : Emmy Noether Seminar Room, ICTS Campus, Bangalore

Abstract : Albert Einstein created general relativity in 1915 and in the next year predicted gravitational waves as its important consequence. The first detection of gravitational waves from a black hole binary on Sept 14 2015 was spectacular, taking a century to realize, and made possible by the coming together of an unforgiving experiment and an exquisite theory complemented by the best in sophisticated data analyses, state of the art computing and finally the transition to "big science". For decisive contributions to the LIGO detector and the observation of gravitational waves, Rainer Weiss, Kip Thorne and Barry Barish were awarded the 2017 Physics Nobel Prize. The recent discovery of Gravitational waves from binary neutron stars and the intense associated electromagnetic follow up heralds a new astronomy and even at this first detection the impact on astrophysics, cosmology and fundamental physics is already palpable.