



Homi Bhabha Award Lecture

Prof. Takaaki Kajita, Nobel Laureate

Sarojini Damodaran Distinguished Visitor

23 December 2019 at 4:00 P.M.

**Venue : Dr. Homi Bhabha Auditorium, TIFR
Homi Bhabha Road, Mumbai 400 005**

Prof. Takaaki Kajita has been awarded the 2019 TIFR-IUPAP Homi Bhabha Medal and Prize for his outstanding contributions in the discovery of neutrino oscillations and other path-breaking contributions in the field of Astroparticle physics. He discovered that the theoretical models could not explain the ratio of atmospheric muon neutrino to electron neutrino events in the Kamiokande experiment. He pioneered the development of particle identification in water by Cherenkov ring imaging technique, which led to the discovery of neutrinos oscillations. This was an unexpected, and possibly the greatest discovery of the past half-century, as evidenced by the award of Nobel Prize in 2015. This discovery had a huge impact on our understanding of cosmology, cosmic ray and particle physics, and opened doors in many other scientific fields.

Prof. Kajita leads KAGRA a large cryogenic gravitational wave detector and the next generation neutrino detector Hyper-K, both located in Japan. He co-chairs the International Neutrino Panel created by the IUPAP that draws experts from nuclear, high-energy and cosmic ray physics, and is tasked with the responsibility to identify the next generation of experiments to measure the neutrino properties. He is an adjunct member of the IUPAP Commission on Astroparticle Physics (C4) and is the Director of the Institute for Cosmic Ray Research, the University of Tokyo.



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