



Physical Research Laboratory, Ahmedabad

3rd PRL-IAPT Dr. Vikram Sarabhai Lecture-2021

Speaker: Prof. Srubabati Goswami
Senior Professor, Theoretical Physics Division, Physical Research Laboratory, Ahmedabad

Title: "Neutrinos: the invisible messengers."

Time: Thursday, 11 February 2021, 16.00 hrs.

Abstract

Neutrinos are all around us, yet they remain elusive since they hardly interact with matter.

This talk will discuss the various sources of neutrinos and the detection of the neutrinos in terrestrial detectors. These experiments have established that different kinds of neutrinos transform among each other on their way from the source to the detector. This is the phenomenon of neutrino oscillation, which requires neutrinos to be massive, compelling us to think beyond standard ideas of fundamental particles and their interactions. This opens a new window towards a deeper understanding of nature.

Some future directions in this field, including the India-based Neutrino Observatory (INO) and the importance of neutrinos in multi-messenger astronomy, will also be discussed.

The Speaker



Prof. Srubabati Goswami is currently a senior Professor at Physical Research Laboratory, Ahmedabad. She did her Ph.D. from the University of Calcutta and then carried out post-doctoral research at Physical Research Laboratory and Saha Institute of Nuclear Physics, Kolkata. She joined Harish Chandra Research Institute, Allahabad, in 2002 as a member of the faculty and shifted to PRL in 2008. Her research area is High Energy Physics phenomenology with a special emphasis on neutrino physics. She has published over 100 papers in peer-reviewed journals and is a well-reputed international expert in the subject, and has delivered several invited plenary talks in major international conferences. She is a member of the India-based Neutrino Observatory collaboration. She has received several awards, including the Humboldt fellowship from the Alexander-von-Humboldt Foundation, Germany, P. Sheel memorial lecture award for women scientists from NASI, C. V. Raman Mahila Vijnana Puraskara from Swadeshi Vijnana Andolana, Karnataka, and the J.C. Bose National Fellowship of SERB. She is an elected fellow of all the three science academies (NASI, INSA, and IASc) in India and The World Academy of Sciences (TWAS).

ALL ARE WELCOME

Live streaming on PRL YouTube channel:

<https://www.youtube.com/watch?v=ioP1hhygy4E&feature=youtu.be>

