

## D. P. Roy Memorial Lecture 2022

Durga Prasad Roy (1941-2017) was a pioneer in the field of particle physics in India, especially in the physics of High energy colliding beam machines. He worked at TIFR for more than four decades. This is the third of a series of Memorial Lectures made possible by the generosity of Mrs. Manika Roy and the family of the late Prof. Roy.



### Shedding light on the Dark Matter in the Universe

Prof. Rohini Godbole, IISc Bangaluru

Monday March 14<sup>th</sup>, 2022, at 4:00 pm,

**Venue - Zoom 978 3096 7882**

**Live Webcast - <https://youtu.be/9rGPYzw9FmY>**

This talk will discuss one of the next frontiers to be crossed in the everlasting march towards unravelling the mysteries of nature, viz. the issue of Dark Matter (DM) in the Universe. In this context, I will talk about the observations that compel the scientists to believe that the DM exists, and also explore its connection with accepted theories of particle physics. I will then talk about various ways to probe its nature and properties at the Large Hadron Collider the LHC, the future electron-positron colliders like the ILC, as well as other experiments happening deep underground. In the last part, I will touch upon some research work that I have been engaged in over the last few years in the context of the Supersymmetric Dark Matter, the lightest supersymmetric particle, LSP.



Prof. Rohini M. Godbole, currently Honorary Professor at the Indian Institute of Science, Bangalore, is a theoretical particle physicist. Her research over the past four decades, on exploring the Standard Model of particle physics and physics beyond the standard model, has resulted in over 300 publications in refereed journals/arXived preprints as well as a graduate textbook. Her pioneering work on probing hadronic interactions of photons provided important insights for the design of electron-positron colliders, and her suggestions to probe standard model (and beyond standard model) physics have been used in experiments at different colliders.

Prof. Godbole's extensive contributions to science and society have been recognised by the Government of India through the conferment of the Padmashri in 2019 and by the French Government through the honour Ordre National du Mérite in 2021. She has received numerous other prizes and awards including the Lifetime Achievement award in 2021 from the Karnataka Academy of Science and the Birla Award of the Indian Physics Association. Prof. Godbole has been an avid supporter of the cause of women in science. She chaired the Committee on Equity and Inclusion for India Science, Technology and Innovation policy of 2020.

Prof. Godbole was at TIFR in the 80's and has collaborated with Prof. D. P. Roy extensively.