



**Members of the Council of the
INDIAN SCIENCE NEWS ASSOCIATION (ISNA)**
request the pleasure of your company at the

S.N. Bose Memorial Lecture 2025

to be delivered by

Prof. Amitava Raychaudhuri

INSA Senior Scientist
Formerly, Sir Tarak Nath Palit Professor of Physics
Department of Physics, University of Calcutta

on 21st August, 2025 at 5.00 p.m.

in the

N.R. Sen Auditorium
Rashbehari Siksha Prangan, University of Calcutta
92, Acharya Prafulla Chandra Road, Kolkata – 700 009

Prof. Bikas K. Chakrabarti

President, ISNA
former Director, Saha Institute of Nuclear Physics, Kolkata
will preside over the programme

INDIAN SCIENCE NEWS ASSOCIATION
92, Acharya Prafulla Chandra Road
Kolkata 700 009 *Phone :033-2350-2224
Dated: August 12, 2025

Professor Manas Chakrabarty
Dr. Amit Krishna De
Honorary Secretaries, ISNA

Topic: The Enigma of Mass

Abstract: Mass is a very familiar property. Yet, it remains quite intriguing. It plays a central role in gravitation. An understanding of the origin of mass of elementary particles through the Higgs mechanism was only recently established. In the very successful Standard Model of particle physics neutrinos are massless. But experiments over the last two decades have conclusively established that neutrinos do have a non-zero but very tiny mass, whose origin remains unknown. Another important manifestation of mass is through Dark Matter, which too does not have an explanation within the Standard Model. In this talk we take a trip through these issues without going into technical details.

Speaker: Amitava Raychaudhuri is INSA Senior Scientist at the University of Calcutta. He was educated at Presidency College, Kolkata and Delhi University, and obtained his Ph.D. in particle physics from the University of Maryland, USA working with Professor O.W. Greenberg. He has held faculty positions at the University of Calcutta for more than thirty years and was the Sir Tarak Nath Palit Professor of Physics during 1996 - 2017. From 2005-2011 he was the Director of the Harish-Chandra Research Institute, Prayagraj under the Department of Atomic Energy, India. He has held visiting appointments at the Universities of Oxford and Cambridge in the UK, at the University of California at Berkeley, and at CERN in Geneva. Professor Raychaudhuri's research contributions span many areas of particle physics, including Neutrino physics and the Higgs boson. He is a recipient of several honours and distinctions, among which are the Shanti Swarup Bhatnagar Award and the International Alumnus of the Year 2005 of the University of Maryland. He is a Fellow of the three National Science Academies of India.