



PRESENTS

QuantumFyed

KNOWLEDGE ABOUT QUANTUM WORLD, QUANTIZED.

SPEAKER



Prof. G. Rajasekaran

Professor Emeritus

Former Joint Director

Institute of Mathematical Sciences (IMSc) Chennai

EVENT TIME

3rd January 2020

10:30 AM

 [Youtube Link](#)

10th January 2020

11:00 AM

 [Youtube Link](#)



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Prof. G Rajasekaran



Prof. G Rajasekaran fondly called “Rajaji” had simple beginnings from Kamudi, Remote Area from Ramanathapuram District of Tamil Nadu. An alumnus of American College and Madras Christian College, obtained his Ph.D. from the University of Chicago in the year 1964.

He has been associated with the Tata Institute of Fundamental Research (Professor & Head of the Dept of Theoretical Physics), University of Madras, and the Institute of Mathematical Sciences (Joint Director and Distinguished Professor). Currently he is Professor Emeritus at the Institute of Mathematical Sciences and Adjunct Professor at the Chennai Mathematical Institute. In a career spanning around six decades, Prof. Rajasekaran published more than 180 research papers and made fundamental contributions in High Energy Physics. He is still active in teaching physics and an important member in the INO project. He is a Fellow of Indian Academy of Sciences, Indian National Science Academy and National Science Academy of India. He is recipient of the Meghnad Saha Award, FCCI Award, SN Bose Medal as well as Homi Bhabha Medal (as topper of the first batch of BARC Training School).

TOPICS

DAY 1

Standard Model of High Energy Physics and Beyond

One hundred years of Fundamental Physics have culminated in a theory called Standard Model of High Energy Physics. This theory is now known to be the basis of almost ALL OF KNOWN PHYSICS except gravity. The discovery of the Higgs Boson in 2012 has established this theory. Understanding neutrino mass, Dark Matter and Supersymmetry are some of the issues beyond Standard Model. But the main loophole is gravity which has been left out of the Standard Model.

The energy scale of quantum gravity, known as the Planck scale, is 16 orders of magnitude higher than the presently accessible TeV energies. So there is a long way to go.

DAY 2

The Story of The Neutrino and INO

Many important discoveries have been made in the field of neutrinos in the last 20 years and more are expected. The story of the discovery of neutrino mass through neutrino oscillations will be described. Experiments on solar neutrinos and atmospheric neutrinos which made this discovery were awarded Nobel Prize in 2002 and 2015. A mega project called India-based Neutrino Observatory(INO) is planned to come up in Tamil Nadu. The project and its present status will be described.

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