



INDIAN NATIONAL SCIENCE ACADEMY
Hyderabad Chapter and
UNIVERSITY OF HYDERABAD



have great pleasure to invite you and your colleagues for
INSA-Lecture Series

Date: Tuesday, 7th March 2017.

Venue:

Seminar Hall, School of Life Sciences, University of Hyderabad

@11.15 A.M.

Professor K Naha Memorial Medal Lecture (2016)

by

Prof. V. P. Dimri

Dr. Homi Bhabha Chair Professor @ UoH
& Former Director, CSIR-NGRI, Hyderabad

Title: "Modeling of complexity in Earth system using fractals and beyond fractal theory"

ABSTRACT: Fractals are everywhere including in the Earth system, which is very complex. The analysis & modeling of such a complex system cannot be done in Euclidean geometry, instead fractal geometry is appropriate. Further, physical properties of the Earth system obtained from different deep bore wells from different continents and Oceans reveal that the physical properties follow fractal distribution rather than uniform or random. A theoretical relationship between the fractal field and source like magnetization and density have been achieved. The relation is applied to develop a new technique called scaling spectral method to interpret magnetic and gravity measurements to know their sources. It is also observed that before the big earthquake fractal dimensions are decreased, so this observation can be used as a precursory signal for big earthquakes. In this talk various geological structures like folds, faults, etc. have been modeled by fractals. The structures beneath the surface have also been modeled using fractal combined with Tessellation to match the observed geophysical anomalies.

Lunch: 12.45 P.M. to 01.30 P.M.

@02.00 P.M.

Professor Daulat Singh Kothari Memorial Lecture (2017)

by

Prof. D. Balasubramanian

Distinguished Scientist (& Director of Research Emeritus)
L V Prasad Eye Institute (LVPEI), Hyderabad – 500 034

Title: "Science and Humanities: the twain is beginning to meet"

ABSTRACT: Even today, many think and feel that the field of science and that of humanities and sociology are what CP Snow described as "Two cultures", with nothing in common, and that the 'twain' may not meet. Recent developments and practice of research in areas of humanities and social sciences, particularly in economics and sociology, using tools of 'science' such as epidemiology, mathematical analysis, have made them dubbed as "soft science". From the other side of the twain have been the deliberate introduction of elements of 'soft ideas' such as ethics, care for animal and human rights in the practice and experiments in 'hard' science, particularly after the infamous experiments conducted using Negroes and Jews, as experimental subjects. Even more dramatically, and revealingly, the reading and understanding of the Human Genome has made us all realise how science has demolished manmade discrimination of people into races, communities, castes and such. What science has told us today is reminiscent of what philosophers of yore had hoped and declared that all people are of the same family. The twain is now close to meeting.

High tea follows....

For info: Prof. A.S. Raghavendra (23010630)/ Dr. Ashok Karumuri (23132675)