



Physical Research Laboratory, Ahmedabad

K.R. Ramanathan Memorial Lecture

Speaker : **Prof. Nigel J Mason**
The Open University, Milton Keynes, UK.

Title : **Astrobiology - The Cradle of Life**

Abstract

How did life begin and evolve on Earth? What are the conditions under which life can exist? Does life exist elsewhere in the Universe and, if it does, how can it be detected/identified?

One of the greatest challenges for science in the 21st century must be to provide answers to these questions. Indeed the discovery of life on a planet other than Earth (even in its simplest form) will be a defining moment in human history, while understanding the origins of life itself on Earth would be a crowning achievement of human scientific endeavour.

Today, for the first time it is possible to develop a robust scientific programme to explore these fundamental key questions. However, this requires a transdisciplinary alliance drawing on researchers from astronomy, biology, chemistry, engineering, geosciences, physics and, even perhaps philosophy, in turn fostering a new generation of researchers who will need a range of cross disciplinary skills and a wider more polymorphic approach to the conduct of such research. This is the new science of 'Astrobiology'.

In this talk I will explain how astrobiology is developing and discuss when we might expect answers to these fundamental questions.

The Speaker

Prof. Nigel Mason, Order of the British Empire (OBE) is Professor of Molecular Physics, and Astronomy, The Open University, Milton Keynes, UK and is the Associate Dean for Research, Open University. His research covers a wide range of Atomic Molecular and Optical Physics topics spanning physics and chemistry including Astrochemistry, atmospheric science, surface science and spectroscopy and formation of molecules by irradiation of low temperature (20K) ices, which has led to a new research programme exploring processes on planetary systems and in the interstellar medium. Most recently his research has extended to study radiation damage processes within biomolecular systems including DNA. He has more than 275 publications in peer reviewed journals, and had been in the Editorial board of many reputed journals. Currently he is the Editor-in-Chief, European Journal of Physics D and Editor, European Physics Journal: Techniques and Instrumentation and is the member of many professional bodies and research councils in Europe and America.

Tuesday: November 19, 2013, 18:00 hrs

K.R. Ramanathan Auditorium, PRL

Tea at 17:30 hrs.

ALL ARE WELCOME